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PART I.

ORIGINAL COMMUNICATIONS.

ART. VII.—*On the Efficacy of Electricity, Galvanism, Electro-Magnetism, and Magneto-Electricity, in the Cure of Disease; and on the best Methods of Application.* By M. DONOVAN, M.R.I.A., formerly Professor of Chemistry to Apothecaries' Hall.

(*Continued from page* 128 *of Journal for February.*)

THE important subject of the treatment of asphyxia has also occupied M. Le Roy. According to his experiments a quick inflation of the lungs of drowned persons with air is injurious; not so inflation gradually and slowly applied with a straight tube; but he prefers resuscitation by galvanism. He plunges a short and very fine needle between the eighth and ninth ribs, a few lines inwards, until it reaches the attachments of the diaphragm. Then he establishes a current with a pile of twenty-five or thirty pairs of one-inch plates: as soon as the diaphragm contracts, and an inspiration has been made, he immediately interrupts the circuit, while expiration is tak-

ing place, and then re-establishes it to occasion a new inspiration. Galvanism, which, continuously applied, produces only disorderly movements, when made to act in this manner, causes regular respiration. He has repeatedly thrown animals of the same species and strength into a state of asphyxia by submersion ; and while those which he left to themselves perished, those treated by galvanism were saved(*a*).

M. Jadelot, the translator of Humboldt's work on galvanism, states, as a consequence of experiments, that "the diaphragm in warm-blooded animals is the muscle which, if not irritated most strongly, is at least irritated with most readiness."(*b*) The fact is favourable to M. Le Roy's views of the treatment of asphyxia.

The resuscitation, by galvanism, of infants born in a state of asphyxia, has been suggested by Dr. Radford, of Manchester(*c*), and in all probability the attempt, assisted by subsidiary means, would often be attended with success.

The following remarkable case of recovery from hydrophobia by galvanism would scarcely be credited but that it is well attested. It is extracted from a "Report presented to the Class of the exact Sciences of the Academy of Turin, on the Action of Galvanism," by S^r^ Vassalli Eandi.

A man bitten in the finger by a mad dog came to consult him on account of pains which he felt in the arm, the back, and particularly in the finger which had been bitten a month before. The actual cautery applied to the finger removed the pains, but in a few days after they were again felt, accompanied by symptoms of hydrophobia. The patient could no longer look at water without trembling ; an inflammation in the throat prevented his swallowing bread, even after he had chewed it; and a strong desire to bite was manifested every moment.

In this state he was brought to S^r^ Rossi, who, seeing that he could not bear the sight of water, and not even of bright

(*a*) *Archives Générales de Médecine*, tom. xii. p. 461.

(*b*) Phil. Mag., vol. vi. p. 250. (*c*) Provin. Jour., Dec. 1844.

bodies, prepared in another apartment a pile of fifty pairs of discs of silver and zinc, alternated with pasteboards moistened in solution of muriate of ammonia. Finally, he used a small band of moistened coarse paper, as a conductor, on which the naked feet of the patient were placed, and at the moment when he opened his mouth to bite, one end of a conducting arc was pushed in, the other end being connected with the pile. The patient suffered much from this operation, which, after many shocks, weakened him so that he could no longer support himself. Being then stretched on the ground, he was galvanized at ease: the operation caused the perspiration to break out in drops. Next morning the patient himself came to S^r^ Rossi, and informed him that he was completely cured, as he no longer felt pain or difficulty in swallowing, and that he had entirely ceased to feel aversion to water and liquids: no reasoning, however, could persuade him to submit to a new operation. But in a few days after, some slight pains having made him apprehensive of a new attack of hydrophobia, he returned to Rossi, who, by means of galvanism, again caused all the symptoms to disappear. This cure was effected in the presence of several persons. Such sensibility had the patient, that he felt the effects of the shocks for a month after in his shoulders(*a*).

There is a use to which voltaic electricity may be applied, and to which medical practitioners in this country seem to have paid but little attention. Experiment has long since proved the influence which voltaic electricity exerts over affinity, and to such an extent that compound bodies, in which the component parts are united by the most powerful affinities, are not only decomposed, but their elements are transported to great distances, and are even carried through substances without combining, to which they, nevertheless, have a strong attraction, and to which they would otherwise have united. Some singular instances of this transference have been dis-

(*a*) *Journal de Physique*, tom. lvi. p. 308.

covered by philosophers, in connexion with the economy of the human body.

Sir H. Davy having placed his fingers, previously well wetted with distilled water, in contact with distilled water in the positive part of the voltaic circuit, phosphoric, sulphuric, and muriatic acids rapidly passed into the water from his body. On making a similar experiment at the negative side, fixed alkali made its appearance. "Now," says Becquerel, "since acid and alkaline substances can thus be separated from their combinations in the living body by means of electrical power, there is reason to believe that, by the same means, may be introduced into the living body different substances, capable of reacting on the organs in different pathological cases."

The hint conveyed by Becquerel had been already acted upon.

Dr. Fabré-Palaprat has made some experiments which seem to promise great results, if the subject be sedulously followed up by practitioners. They were as follows :—After having dried as much as possible both arms of a woman, he applied to one of them a compress soaked in a solution of iodide of potassium, which he covered with a plate of platinum in communication with the positive pole of a pile formed of thirty elements, and charged with a liquid adequate to produce decomposition. He placed on the other arm a compress moistened with amidon, which, being covered with a plate of platinum, was made to communicate with the negative pole. In a few moments, the amidon had assumed a blue colour, clearly proving that the iodine had been transported through the interior of the body, since the skin, which was sufficiently dry, could not give passage to a current.

In another experiment, he removed the epidermis lightly from the skin; the effect was more marked. We know that, in combining acupuncture with the action of the pile, the steel needle communicating with the positive pole is oxidated, which shews the chemical effect of the pile. Dr. Fabré-Palaprat,

profiting by this observation, has endeavoured to transport iodine, or other reagents, by means of needles, into a part of the body. To effect this he replaced the negative plate with several steel needles, disposed as in acupuncture ; the iodine, or other electro-negative reagents, were quickly transported to the extremity of the needles, and thence reacted on the surrounding parts. Dr. Fabré-Palaprat assures us that he has employed this process with success to discuss engorgements which had resisted all other treatment(*a*).

It appears, therefore, that the constitution of the fluids of the body may be altered, certain principles may be withdrawn, and the ratio of the remaining principles may be changed. A direct control, not possessed by any other medicinal agent, may thus be established, at least in limited localities, with results which it is impossible to anticipate. In the same manner, a new mode of entrance into the human body of active remedial agents is indicated, more quick, more direct, more certain, than any other known, without the risk of being injured or altered by digestion, or of being eliminated by excretion. The advantage of introducing active remedies into diseased organs directly, without the intermediate process of absorption or circulation, and, at the same moment, withdrawing them from the body without the possibility of leaving residual quantities behind, which might at length do mischief, is great and obvious. It remains to be proved whether these active substances, controlled, as they must be, *in transitu*, by the powerful influence which transports them, will be adequate to the exertion of their usual therapeutic effects. The process, surely, deserves a trial; if it succeed, it will be a benefit conferred on human nature, but it can only be conferred by energy, industry, and enterprise, on the part of the medical profession.

The control which galvanism exercises over neuralgic pains is well known, and is frequently called in to the aid of the

(*a*) Becquerel, vol. iv. p. 320.

physician. The following cases were treated by Dr. Harris, one of the surgeons to the Pennsylvania Hospital.

Mr. J. L., aged 38, was affected with epilepsy, of several months' continuance. His paroxysms occurred daily, were very violent, and were accompanied with such nervous irritability, that he could not endure without complaint the noise made by any person in walking across the room. For several years previous to his epileptic attack he complained of constant pain in his head. This pain, which appeared neuralgic in its character, continued with little intermission, and was particularly violent when Dr. Harris was first consulted. Finding that all the usual remedies had been previously tried, Dr. Harris employed the galvanic apparatus of Mansford(*a*). After this had been applied during a few days, the nervous irritation and neuralgic pain ceased entirely, and his epileptic paroxysms became much less frequent and violent. The neuralgia being removed, the patient urged the discontinuance of the process: it is very probable that the cessation of the epileptic fits would have been the reward of perseverance.

His next case was that of a boy, aged 11, who had been afflicted during eleven months with violent and increasing neuralgia of the head. The paroxysms came on at night; in the day-time he complained of great lassitude, and he was always depressed in spirits. Most of the usual remedies having been tried without success, galvanism was applied according to Mansford's plan. On the eleventh day of its application the pain entirely ceased, and although two years have elapsed, says Dr. Harris, he has had no return of it.

A lady, aged 48, was troubled with a neuralgic affection of her head and face, of eight years' continuance, during which the usual remedies had been tried by an eminent physician, without any good effect. On the fourth day of the application of galvanism the pain began to diminish, and on the twenty-

(*a*) This apparatus will be hereafter described.

third day it ceased altogether. She had two slight returns, both of which were subdued by the same means.

The next case was that of a lady, who had suffered for fourteen years from neuralgia of a most aggravated character. It was diffused over every part of the body. The head, face, tongue, heart, stomach, uterus, and almost every region of the system, were, by turns, invaded by this terrible disease. Galvanism, applied for five weeks, mitigated, but did not cure it.

A second case of the same kind was similarly treated, and with a similar result. Two cases of neuralgia, confined to the head or face, were perfectly cured by the application of galvanism(*a*). Magendie finds that voltaic electricity is particularly effective in neuralgia, especially when the current is made to pass in the direction of the diseased nerve.

Dr. Prösch, of Hamburgh, found this agent more serviceable in neuralgia when introduced by acupuncture needles; but in rheumatism it proved a sovereign remedy; a single application having, as he declares, often removed an attack of chronic rheumatism. He considers that it exercises a decided influence upon the catamenia, and that it frequently produces that evacuation when applied to parts far removed from the hypogastrium, as, for instance, the arm. It has been found very efficacious in cases of amenorrhœa.

It is necessary to give a description of the apparatus of Mr. Mansford, alluded to in the foregoing statements, and his method of using it.

"In order to fulfil the indication stated at the commencement of this section, it was desirable to establish a negative point as near the brain as possible, and a positive one in some distant part of the body. Accordingly, a portion of the cuticle, of the size of a sixpence, being removed by means of a small blister on the back of the neck, as close to the root of the hair as possible, and a similar portion in the hollow beneath, and

(*a*) American Jour. of the Med. Sciences, vol. xiv. p. 386.

on the inside of the knee, as the most convenient place; to the wound in the neck a plate of silver, varying, according to the age of the patient, from the size of a sixpence to that of a half-crown, was applied, having affixed to its back part a handle, or shank, and to its lower edge, and parallel with the shank, a small staple, to which the conducting wire was fastened. This wire descended the back till it reached a belt of chamois leather, buttoned round the waist; it then followed the course of the belt to which it was attached, till it arrived opposite the groin on the side it was wished to be used; it then passed down the inside of the thigh, and was fastened to the zinc plate in the same manner as to the silver one. The apparatus so contrived was thus applied: a small bit of sponge, moistened in water, and corresponding in size to the aperture in the neck, was first placed directly upon it; over this a larger piece of sponge, of the same size as the metallic plate, also wetted, was laid; and next to this the plate itself, which was secured in its situation by a stripe of adhesive plaster passed through the shank on its back, another above, and another below it. If these be properly placed, and the wire which passes down the back be allowed sufficient room, that it may not drag, the plate will not be moved from its position by any ordinary motion of the body. The zinc plate was fastened in the same manner, but in place of the second layer of sponge, a bit of muscle, answering in size to the zinc plate, was interposed; that is, a small bit of moistened sponge being first fitted to the aperture below the knee, the piece of muscle, also wetted, then followed, and on this the plate of zinc. The apparatus thus arranged will continue in gentle and uninterrupted action from twelve to twenty-four hours, according to circumstances. This last is the longest period that it can be allowed to go unremoved. The sores require cleansing and dressing, and the surface of the zinc becomes covered with a thick oxide, which must be removed to restore its freedom of action. This may be done by

scraping or polishing, but it will be better if removed twice a day, both for the greater security of a permanent action, and for the additional comfort of the patient."(*a*)

Dr. Marcus reports several instances of the successful application of galvanism in the great hospital of Bamberg. One was a case of paralysis of the arm, in which a complete cure was effected. Another was one of violent headach after a remitting fever, which could not be subdued by any medical treatment. The pain was lessened during the first application, when the temples, the forehead, and the neck, were moderately galvanized, and after some further application it ceased entirely. But in a few days it returned; the experiment was repeated, and by this it was entirely removed. A case of sciatica, which had resisted all remedies for more than two months, was completely cured by galvanism, after its application had been repeated for eleven days successively. Three instances are given of the control of galvanism over epileptic fits, the paroxysm having immediately ceased on bringing the hands of the patient into proper contact with the two poles of the pile. By employing galvanism with one of these patients, when he was free from the disease, the paroxysm was postponed. Dr. Marcus recommends the conductors to be applied to the spine, where the nerves of the neck, back, and lumbar region, issue(*b*).

Dr. Bischoff, of Jena, has also treated a case of epilepsy with advantage by galvanism. The subject of the disease, a man aged 43, had been the victim of this intractable malady, in its most violent form, for five years, notwithstanding the employment of the most efficacious remedies. The paroxysms returned once, twice, and sometimes three times a week, at night; and in the day-time he was troubled with spasmodic affections of the extremities and face. He was made part of the circuit of 120 pairs of plates, receiving forty shocks twice a day, at first, and at length 200; and, beside this, he was

(*a*) Mansford on Epilepsy. (*b*) Med. and Phys. Jour., vol. x. p. 350.

allowed to remain for above five minutes in the circuit, a mode of application particularly recommended by Dr. Bischoff, as acting without interruption on the senses. Within a few days, the external spasms gradually ceased, and the galvanism being continued for two months, the epileptic paroxysms intermitted to once in three weeks(*a*).

The influence of galvanism on the uterus is well worthy of the attention of practitioners. The efficacy of this agent in inducing contractions of the fibres of the uterine tissue, in cases of severe flooding, has been shewn by Dr. Radford, of Manchester. Circumstances induced him to anticipate that such contractions would lessen those large venous orifices which are exposed by the separation of the placenta, and bring the walls of the uterus into firm apposition with the body of the child, so as to entirely close them. He was soon enabled to prove the correctness of these views by being called to a case of frightful internal hæmorrhage during labour, attended with extreme exhaustion. By this case he ascertained that galvanism produces a powerful contraction of the uterus, both tonic and alternate, such as he had previously no conception of. The alternate contraction excited by galvanism, applied at intervals, is analogous to, and as powerful as, that which is observed in normal labour, and the tonic contraction is greater. He applied galvanism in a case where the membranes were unruptured, and the uterus in a state of great inertia ; alternate contraction was immediately produced : the membranes, previously flaccid, became tense, and protruded low down into the vagina ; and when the conductors were removed, so great a degree of tonic contraction of the uterus had been induced that it could not collapse. Thus, in cases of exhaustion from hæmorrhage, the woman can be placed in such a state of safety that delivery may be postponed until it can be safely accomplished, and meanwhile measures may be taken to raise the vital powers. Dr. Radford also suggests the employment of

(*a*) Med. and Phys. Jour., vol. vii., p. 538.

galvanism in other cases of uterine hæmorrhage, which he fully describes.

The apparatus made use of is that of Abraham and Dancer, by which the effects may be nicely graduated. The following is Dr. Radford's description of the mode of using it. One of the ordinary conducting wires is applied externally; the other conductor, contrived by himself, "consists of a strong brass stem, seven inches long, curved to suit the vagina, and covered with a non-conducting material, having a small screw at its distal extremity for attaching it to a silvered ball: at its other extremity it is received within an ebony handle, which is hollow, and through which passes a strong brass wire, looped at one end, and connected with the conducting wires. This wire is kept disconnected from the brass stem by means of a spiral spring concealed within the ebony handle. The loop is covered with silk, and is intended for the thumb of the operator when he is bringing the wire into connexion with the stem.

"When the remedy is applied, the brass ball of the vaginal conductor is to be passed up the os uteri, and moved about at intervals to various parts of the organ; at the same time the other conductor must be applied to the abdominal parietes, over the fundus uteri. Shocks may also be passed transversely through the uterus by simultaneously applying the conductor on each side of the belly. The application should be used at intervals, so as to approximate in its effects, as nearly as possible, to the natural pains."(*a*)

Some important observations regarding the influence of galvanism upon the action of the uterus during labour have been published during the past year (1846) by Professor Simpson, of the University of Edinburgh. In 1803 Herder attempted to induce and increase the parturient contraction of the uterus by the application of galvanism to this organ, and other practitioners had subsequently written in favour of the proposal. Several cases, intended to shew the probable in-

(*a*) Introductory Lecture, Provincial Journal, Dec. 24, 1844.

fluence of galvanism upon the parturient action of the uterus, have latterly been published in different medical journals. Professor Simpson's experiments were undertaken for the purpose of ascertaining, as far as possible, the exact degree of influence which galvanism possesses over the contractile action of the uterus during labour, and, consequently, the amount of aid which we might expect to derive from this power when there is occasion for having recourse to its assistance. After detailing eight cases, Professor Simpson concludes as follows: "It would be hasty, and logically incorrect, to deduce from the preceding observations that under no modification, and under no manner of application, does galvanism possess the power of directly exciting or increasing the contractile action of the uterus. Forms or methods of employing it may yet possibly be detected or devised, affording a different result; but I believe I am justified in inferring from the preceding inquiry, that, as employed at the present time, and in its present mode, it is not a means which can be in any degree relied upon for the purpose in question, and is, so far, practically and entirely useless as a stimulant to the parturient action of the uterus."(*a*)

From these statements of Dr. Radford, Professor Simpson, and others, it appears that galvanism possesses an undoubted influence over the uterus, but that as yet the circumstances under which it can be made most beneficial have not been ascertained.

M. Orioli, "one of the most distinguished philosophers with whom Italy is honoured," says Becquerel, proposes to use galvanism in the interior of the bladder by means of a sound, varnished everywhere except at the point. The sound is made to communicate with one end of the pile, while the other end is put in connexion with the reins: "Perhaps," says he, "a calculus may thus be decomposed." Dr. Harle, of Norwich, conceived the same idea(*b*).

(*a*) Monthly Jour. of Med. Science, July, 1846. (*b*) An. of Phil., No. xxvi. p. 114.

M. Bouryes des Mortiere dissolved a calculus, out of the body, weighing one grain, perfectly, in twenty-four hours, by galvanism. But MM. Prévost and J. Dumas have gone far towards proving the possibility of successfully employing galvanism as a means of destroying a calculus in the bladder. A fusible human calculus, placed in water, was submitted to the action of 120 pairs of plates during twelve hours. The bases and the phosphoric acid were liberated at their respective poles, but, owing to the nature of the arrangement, they reunited in a fine powder. The weight in this period was reduced by twelve grains. Other trials were made during sixteen hours, and at the end of this time the calculus was reduced to a mass so friable that the slightest pressure reduced it to little crystalline grains, which could easily pass through the urethra.

MM. Prevost and Dumas conceive that it is almost always possible to introduce into the bladder two conductors which shall be spread out at the extremity by means of a slight spring, so that they may touch the calculus by their internal surface, which, in this part, is deprived of its insulating envelope. The calculus would be thus decomposed without injury to the bladder, since the current takes the shortest distance between the two poles.

To prove that the galvanic process may take place in the bladder without injury, they introduced a properly prepared pair of conductors through the urethra of a dog into the bladder, and connected them with a pile of 135 pairs, acted on by nitro-sulphuric acid. They remarked with much satisfaction that the dog was not discoverably inconvenienced while the bladder was distended with injections of lukewarm water ; yet this same apparatus was capable of decomposing water with great energy, and furnishing torrents of gas.

A fusible calculus was then fixed to a sound between the two platinum conductors, and the whole was introduced into the bladder of a large bitch ; lukewarm water was injected, and the conductors were put in connexion with all the troughs

which composed their battery. After some slight movements, the animal was quiet, and endured the galvanic action for an hour. The calculus, when withdrawn, shewed unequivocal traces of decomposition. The same process was repeated morning and night for six days; but the calculus had now become too friable to permit further repetition, and had lost weight in the same ratio as the former one. The animal, after a few days' repose, was killed, when it was found that the bladder was in its natural state.

These experiments, it must be confessed, render it probable that this mode of removing calculi from the bladder may one day or other take the place of the two operations at present in use, except when the calculus consists of uric acid, which is, unfortunately, too commonly the case. The editors of the *Annales de Chimie* subjoin to this paper an observation that nitrate of potash, dissolved in the water injected into the bladder, renders the decomposition of hard, compact phosphates as easy as that of the porous kinds. They also satisfied themselves that the bladder is not injured during the action of the pile; and they think that instruments may easily be contrived for determining the nature of the calculus on which it is proposed to operate(*a*).

The galvanic influence may, with more certainty, be made to act on the bladder itself than on any thing contained in it: it exerts a decided efficacy in restoring the energy of that organ. The case of a lady under the care of Drs. Goodwin and Radford is described, who, after her accouchement, was unable to evacuate the contents of the bladder. All the usual remedies failed during a fortnight's trial; the catheter was employed two or three times a day, and could not be dispensed with. On Dr. Goodwin's suggestion galvanism was tried, and the *first application proved successful*(*b*).

In that most distressing and intractable disease, asthma, in

(*a*) *Annales de Chimie et de Physique*, No. xxiii. p. 202.

(*b*) Provincial Journal, Dec. 24, 1844.

which medical treatment so often fails in moments of the greatest emergency, galvanism has been found an easy, speedy, and tolerably certain remedy. Dr. Wilson Philip, an accurate and veracious observer, gives the following account :

"I have employed galvanism in many cases of habitual asthma, and almost uniformly with relief. The time during which the galvanism was applied, before the patient said that his breathing was easy, has varied from five minutes to a quarter of an hour. I speak of its application in as great a degree as the patient could bear without complaint. For this effect I generally found from eight to sixteen four-inch plates of zinc and copper, the fluid employed being one part of muriatic acid and twenty of water, sufficient. Some require more than sixteen plates, and a few cannot bear so many as eight ; for the sensibility of different individuals to galvanism is very different. It is curious, and not easily accounted for, that a considerable power,—that, perhaps, of twenty-five or thirty plates, —is often necessary on first applying the galvanism, in order to excite any sensation ; yet after the sensation is once excited, the patient shall not, perhaps, particularly at first, be able to bear more than six or eight plates. The stronger the sensation excited, the more speedy, in general, is the relief. I have known the breathing instantly relieved by a very strong power. I have generally made it a rule to begin with a very weak one, increasing it gradually, at the patient's request, by moving one of the wires from one division of the trough to another, and moving it back again when he complained of the sensation being too strong. It is convenient for this purpose to charge with the fluid about thirty plates.

"The galvanism was applied in the following manner: Two thin plates of metal, about two or three inches in diameter, dipped in water, were applied, one to the nape of the neck, the other to the pit of the stomach, or rather below. The wires from the different ends of the trough were brought into

contact with these plates, and as great a galvanic power maintained as the patient could bear without complaint. In this way the galvanic influence was sent through the lungs, as much as possible in the direction of their nerves. It is proper constantly to move the wires upon the metal plates, particularly the negative wire, otherwise the cuticle is injured in the places on which they rest. The relief seemed much the same, whether the positive wire was applied to the nape of the neck or the pit of the stomach. The negative wire generally excites the strongest sensation. Some patients thought that the relief was most speedy when it was applied near the pit of the stomach.

"The galvanism was discontinued as soon as the patient said that his breathing was easy. In the first cases in which I used it I sometimes prolonged its application for a quarter of an hour or twenty minutes after the patient said he was perfectly relieved, in the hope of preventing the early recurrence of the dyspnœa, but I did not find that it had this effect. It is remarkable that in several who had laboured under asthmatic breathing for from ten to twenty years it gave relief quite as readily as in more recent cases; which proves that the habitual difficulty of breathing, even in the most protracted cases, is not to be ascribed to any permanent change having taken place in the lungs."

Spasmodic asthma being of rare occurrence, Dr. Philip had but one opportunity of trying galvanism, and then it had no observable good effect. He thinks that in inflammation it would be injurious. A severe cough in habitual asthma does not counter-indicate the use of galvanism. In some, labouring under the most chronic form of phthisis, in whom the symptoms had lasted several years, and habitual asthma had supervened, the relief obtained from galvanism was very great, notwithstanding some admixture of a pus-like substance in what was expectorated. He thinks nothing could be more improper in ordinary phthisis than galvanism. It always gives most

ready and permanent relief in that sense of tightness across the region of the stomach which impedes breathing in habitual asthma. The patients said that the sense of tightness gradually abated while they were under its influence. The duration of relief continued generally, more or less, for twenty-four hours. In almost all, the repetition of the galvanism gradually increased the degree of permanent relief. The process was seldom used more than once a day ; in severe cases twice. About a sixth part of those that have used it appear to have obtained a radical cure : it failed to give considerable relief only in about one-tenth.

Mr. Cole, house-surgeon to the Worcester Infirmary, informed Dr. Philip that no other means employed there have been equally efficacious in relieving this disease(*a*).

The beneficial effects of galvanism, in asthma, have also been proved by other practitioners. M. Martinet reports the case of a man aged sixty-six years, admitted into one of the clinical wards of Professor Récaincer. For a long time he had suffered from asthma, which, two days before his admission to the Hôtel-Dieu, was very much increased. The case was selected for the trial of the effects of galvanism in this disease. When the use of this agent was begun, the asthmatic disorder was in its full force ; but before the first essay was over the respiration became free. Galvanism was continued every second day, and at the end of twelve applications the patient was perfectly cured of his dyspnœa: he ran up a stair of fifty steps with quickness and facility, and without being at all oppressed(*b*).

With such facts as these before the eyes of the profession, and coming from such authority, it is really surprising how so effectual a mode of cure, or of palliation, as galvanism is thus proved to be, has been slighted. It should be remarked here that electro-magnetism is not the agent found successful : a

(*a*) Experimental Inquiry into the Laws of the Vital Functions.

(*b*) *Revue Medicale*, &c., Avril, et Juillet, 1824.

well-arranged galvanic battery of thirty silver plates, each faced with two zinc plates, so conveniently contrived that any number may be brought into action as required, will be absolutely necessary.

The following important case is one of the most convincing instances I have met of the great value of what is called magneto-electricity, as an auxiliary to the medical art : but for its aid the patient would unquestionably have died. A gentleman residing in Valparaiso had swallowed what he purchased as half an ounce of powder of cubebs. He retired to rest, but almost immediately felt a dizziness and inclination to sleep. He was accidentally discovered in the morning by Dr. Page, about twelve o'clock, with his face red and swollen, his lips dark purple, the veins of the forehead and temples turgid; the eyes rolled upward, injected, and their pupils contracted to a point ; pulse moderately full, and very slow ; respiration very slow and gasping. By agitating him violently he was aroused for a moment ; he uttered some incoherent expressions, and sunk back into comatose sleep. Sulphate of zinc and hot mustard and water were administered with due effect as emetics, and the feet were immersed in a bath of mustard and water almost boiling. A little blood was abstracted from the temples, several large sinapisms were applied, and a strong ammoniacal liniment was rubbed over the spinal column, until the skin became very red and inflamed. When the stomach was well cleared, an oleaginous cathartic was given. The patient now appeared to be sinking : the surface was cold, and covered with a clammy sweat ; the face was pallid, and of a purplish tinge ; the jaw and eye-lids were fallen ; and the patient, by powerful sternutatories, and severe blows on the face and shoulders with the open hand, could with difficulty be made to open his eyes. Ammonia and brandy were given, and an injection of turpentine and ammonia was administered. The liniment was again applied over the whole body. The pulse was hardly perceptible, if at times it was to be felt at all.

It was now three o'clock, P.M.: there were no signs of reaction, and the features wore the aspect of death. An attempt was made to walk the patient in the cool air, the stimulants being continued; but, after a few unsuccessful efforts to move his legs, he sunk almost lifeless into the arms of his assistants. He could no longer swallow; his breathing became short and hurried; his mouth was widely extended and his jaw fallen; nothing seemed capable of arousing him.

His medical attendants, Doctors Page, Houston, and Barrabino, who seem to have left no effort untried to save the patient, now completely worn out with fruitless efforts, desisted. At this juncture the fortunate thought occurred to Dr. Page to try the effects of magneto-electricity. Cerebral congestion was urged as an objection, but admitted not to be sufficient, in such a desperate case, to set aside the experiment. While an assistant rapidly rotated the wheel, the balls were applied, at first, to each side of the neck, and then down behind the clavicles. The arms and body now moved convulsively, but the patient lay as unconscious as before. One ball was passed over the region of the heart, and the other to a corresponding point on the right side. In an instant his eyes opened widely, and with a ghastly expression of countenance; his head and body were thrown convulsively toward the operator, and he groaned. He then sunk back into his reclining posture, and was again asleep. The balls were reapplied in the same situation, with similar results, a third and a fourth time, and he cried, "no more." Reaction was now positively established, the heart had received a strong impulse. The pulse was becoming rapidly developed, and the whole surface warm. He was left quiet for an hour, and then he could be awoken by shaking, or calling loudly his name. There was no further occasion for the magneto-electric machine. He was aroused at intervals, and at eleven o'clock at night was sufficiently awake to relate several particulars. On the following morning he was pretty well. He declared

that he had heard many things the preceding day that were said by the persons about him, but that he neither had the power to open his eyes nor move his tongue to speak(*a*). The last thing he recollected hearing was a remark made by Dr. Page, "that nothing more could be done but to make the experiment." From that time all was blank to him, until, as he expressed it, "he felt as if a gun had been fired off within him, which thrilled through and shook him to the very extremities:" this was the application of the magneto-electrical machine. That this patient would have died but for the electricity there can be no doubt; the sudden transition from the extreme limit of life to a flattering prospect of recovery, soon after realized, seems to settle this point. Were evidence wanted, we, unfortunately, have it in the death of a French gentleman, who took a dose of the same cubebs powder, purchased at the same place. At ten o'clock at night he swallowed half an ounce of cubebs, and at twelve o'clock next day he was a corpse. The fatal cubebs powder having been examined by a chemist, it was found that about seventy-five grains of opium had been contained in the dose taken by the patient(*b*) !

It is well known that the poisonous effects of opium are greatly promoted by allowing the propensity of the patient to somnolence to be indulged. The instructive case stated many years since by Dr. Seaman, in which switching all over the body saved an unfortunate sufferer, ought to be borne in mind. If I dare hazard an opinion in such imminent cases, it would be, that no auxiliary to the usual alexipharmacs and other treatment can promise so well as galvanism, applied either through the medium of magneto-electricity or electro-magnetism, or common electric shocks, aided by powerful ten-inch sparks, driven from the nape of the neck through each foot.

(*a*) A similar state of consciousness to sounds has been observed in persons under the influence of the vapour of ether.

(*b*) American Journal of Med. Sciences. April, 1843.

Mr. Erickson states two cases of the beneficial influence of electro-magnetism, when the patients were sinking from a poisonous dose of opium(*a*).

I have now occupied as much space in this Journal as could be fairly devoted to me, yet the subject is far from being exhausted. Much has been done by the practitioners of Dublin, but the length to which this essay has already extended compels me to confine myself to such references as I have in memory. A number of successful cases will be found recorded by Mr. Clarke in Dr. Graves's work on Clinical Medicine. A paper by Mr. Hamilton, of Dublin, will be found in the sixth volume of this Journal, in which he thus sums up the result of his trials : " As a remedial agent, I regret to say, the cases in which this combination of acupuncture with galvanism has been tried leave little to be said in its favour. Even were its efficacy greater, the application is so severe as to preclude its use, except in cases of a hopeless character, and when milder means had been resorted to in vain." See a paper on the use of galvanism in aneurism of the carotid artery, by the same gentleman, and also some objections to its employment in aneurism generally, in the last Number of this Journal, by Dr. O'Ferrall, who considers the application unsafe, as erysipelas may follow and prove fatal. Amongst the papers of Dr. Bellingham, on aneurism, in the Dublin Medical Press, will be found observations on the employment of galvanism in its treatment. In the Monthly Journal of Medical Science, for April, 1846, are the results of trials of electro-magnetism made in different diseases by Dr. Neligan, of Dublin. The first was a case of paralysis of the sterno-mastoid muscle in a girl aged nine years, consequent on inflammation of the cervical fascia. The second was painters' colic, succeeded by paralysis of both fore-arms. The third was paralysis of the muscles of the right shoulder. The three patients were cured in a very short time. He tried the effects of electricity in hemiplegia and paraplegia,

(*a*) American Journal of Med. Sciences. New Series.

in their chronic stage, but with no good effect; and in some apoplectic individuals he has known it produce injurious effects by hurrying the circulation.

In concluding this essay, I must correct an error into which I fell in the beginning, relative to the great uncertainty of frictional electrical machines. I mentioned, as an example, that a large cylinder machine, in my possession, could only be excited to such a degree as to give seven-inch sparks during three days in the course of the summer. I soon after discovered that a bad rubber was the cause of the failure, for on replacing it by a well-constructed one, the case became very different. I can now, even during the heaviest rain, always command from eight to ten-inch sparks; and when the weather is fine, twelve-inch sparks may easily be obtained.

Art. VIII.—*Some Remarks on the Use of Inoculation in syphilitic Buboes, as a Guide to their Treatment.* By John Hamilton, M.R.I.A., Surgeon to the Richmond Hospital.

In Ireland, as far as I am aware, few experiments have been made by inoculating the matter of chancres or other syphilitic sores; yet, besides being the best way of studying the character and natural course of a syphilitic ulcer, I have thought it might be used as a guide for treatment in some cases of syphilis, and with this view have tried it in the tedious sores sometimes following the opening of buboes; and the results have been such as to induce me to submit them to the profession.

Though there may have been some exaggeration of the value of this test to distinguish between chancres and the sores that resemble them, it may perhaps be found useful in medico-legal investigations, where a positive opinion is demanded, as, for instance, where sores follow rape; but in ordinary practice an experienced eye can generally readily distinguish when an ulcer is syphilitic, the characters of which are so well-marked, and when it is not, the signs peculiar to the disease being ab-

sent. Hunter, as is well known, was the first to try inoculation of syphilitic matter, with the object of ascertaining how far it obeyed the laws of other animal poisons, small-pox for instance. B. Bell made experiments, on a more extended scale, to prove the difference between the poisons of syphilis and gonorrhœa. More recently, M. Ricord has published some most interesting facts on the use of inoculation in syphilis; and to this gentleman the very highest praise is due, not only for the ingenuity of his experiments, but for the extreme accuracy of his statements. The facts I have observed in my own trials of inoculation bear out in the minutest particulars the truth of his descriptions. The following case presents a sufficient example of the progress of a syphilitic inoculation.

Syphilis, chancres, and buboes; inoculation with the matter from the latter.—Case taken by Mr. Frazer. Patrick Dunne, a healthy young man, ætat. 19, admitted into Hospital, 18th September, 1846. He contracted the disease the latter end of August: he has phymosis, a chancre on the outside of the prepuce, and two buboes. The day after admission the bubo in the right groin was opened; and, in a few days after, by rest, cleanliness, and the use of the black wash, the inflammation of the prepuce was so reduced that it could be drawn back, when the corona glandis was seen, occupied by many chancres of irregular form, and discharging profusely. The bubo in the left groin was opened; after which another bubo appeared a little above this last, making altogether three, one in the right and two in the left groin: it was also opened.

7th October. The chancres were healed by local treatment, but the buboes shewed no disposition to heal; the wounds made in opening them were enlarged, and had assumed a chancrous character, their surface covered with a yellowish exudation, through which a few granulations appeared, the edges were well defined, raised, and undermined, and had a dull red areola. Ordered five grains of Hyd. c. Creta, three times a day.

13th. Two small punctures were made with a lancet dipped

in the pus of the buboes on the inside of the left thigh close to each other, and a piece of lint steeped in the same matter put over them.

14th. The second day. The punctures surrounded by an areola of a red colour; slightly raised, and, by means of a magnifier, two small vesicles can be seen over the punctures.

15th. Third day. Vesicles very distinct and becoming pustules; redness round them more marked.

16th. Fourth day. They are now decided pustules; the areolæ, being larger and close to each other, have become confluent, and are less perfect in outline.

17th. Fifth day. The larger pustule has burst, and is now a chancrous ulcer.

18th. Sixth day. Both pustules are now open sores, situated on an elevated base of a pink colour; they have a raised border, the centre depressed and covered with a sulphur-coloured exudation, not removeable by wiping.

As they became irritable after this, the saturated solution of the nitrate of copper was applied on a piece of lint, so as to make a slough; this separated in a few days, leaving a healthy granulating sore, which soon healed.

30th. The buboes are healed, and on the next day he was discharged well. He had been kept gently under the influence of mercury for three weeks.

Such is pretty much the course of the inoculation of syphilitic virus. The second or third day a vesicle, the fourth a pustule, which, when broken, discloses a small ulcer, excavated in the substance of the skin, covered with a greyish yellow exudation, having a well-marked raised edge, a red areola, and a hard base, slightly elevated,—in short, with all the characters of a chancre. The ulcer, at first very minute, increases for a time and becomes covered with a scab, but after the real nature is recognized it is best to destroy it while still small, either with the solid nitrate of silver or the saturated solution of the nitrate of copper. Inoculation should never be performed with

matter from a bad sore,—acute or chronic phagedena for example,—as it produces an ulcer precisely similar in character to the one from which the matter was taken. When in Paris, a few years ago, I saw a most intractable chronic phagedenic ulcer in the thigh, the product of inoculation ; and by neglecting this rule I made a very troublesome sore in one of the patients whom I inoculated with the matter from ulcers on the glans and prepuce, of long standing and very rebellious to treatment. M. Ricord gives an instance of a sore on the thigh, inoculated from a chronic phagedenic ulcer, which took the same time to heal as the original ulcer, viz., eight months(*a*).

In the treatment of syphilitic bubo I fully agree with those surgeons who recommend a bubo, even where suppuration has taken place, to be discussed if possible without opening it: this can be accomplished, and should be tried even where the integuments are thinned and red, and fluctuation very distinct. It can best be effected by the administration of mercury, with the application of a few leeches where the bubo is painful or very tender ; and compression, gentle at first, and gradually increased by means of a compress of lint wet with the Lotio Acet. Plumbi., with one-twelfth part of spirits of wine, and a spica bandage. As the bubo gets pale, and the inflammatory action is on the decline, the strong tincture of iodine painted over the surface tends very much to hasten the absorption. In this way I have put back many buboes in which suppuration was fully formed. The three following cases were the last of the kind admitted into the Hospital :

I. John Hynes, a pale, delicate young man, ætat. 18, admitted December 29th, 1846, with an indurated chancre of eight weeks standing on the dorsum of the penis, half an inch behind the corona glandis; also a pale, pink, fluctuating bubo, of large size and oblong shape, situated on Poupart's ligament, tender, painful, and slightly œdematous. There is a thick mottled rash over the chest, belly, and loins.

(*a*) *Clinique Iconographique de l'Hopital des Veneriens.*

January 1st, 1847. He was ordered five grains of Hyd. c. Cret., three times a day.

January 15. He has been kept under a gentle salivation for the last eight days. The lead lotion and compress kept over the bubo, and the strong tincture of iodine has been once applied to it. The chancre was quite healed yesterday. The matter in the bubo has been completely absorbed, the place of the bubo being now occupied by one or two enlarged glands. He was dismissed, and desired to take one pill each night at bed-time for some time longer.

II. Michael Keefe, ætat. 17 ; slight figure ; admitted Jan. 5th, 1847. Six weeks previously he contracted a sore on the glans penis, which soon healed, but another formed on the right side of the scrotum, where it joins the penis, in which situation he had torn the skin with his nails, and some of the matter of the other sore falling on it had produced a syphilitic ulcer. A month after, a bubo formed in the right groin, and a few days ago a second had commenced in the left groin. This last merely consists of a few enlarged lymphatic glands, but the bubo in the right groin is painful, tender, of a pale pink colour; fluctuation of matter distinct, though not very much so ; it is prominent, rather hard, but not deep-seated. There was a mottled eruption on the loins, abdomen, and inside of the thighs, but no other secondary symptom.

January 6th. Ordered five grains of Hyd. c. Cretâ, with a quarter of a grain of opium thrice a day.

January 9th. The fluctuation in the right bubo more evident; the left bubo larger. To be painted with the strong tincture of iodine. 15th. Fluctuation less distinct; a compress wet with acetate of lead lotion and spica bandage; little change in the left bubo; chancre healing. 16th. As the mouth is sore, to take a pill only twice a day. 29th. The buboes have disappeared, a few lymphatic glands, scarcely larger than natural, marking their previous position.

III. James Porter, ætat. 25, pale and sickly looking, was

lately in the Hospital with a bubo in the left groin, above Poupart's ligament, very tender, but fluctuation not very distinct; a long, narrow chancre across the dorsum of the penis, about one inch behind the corona glandis. By leeches, the application of the tincture of iodine, and pressure, with calomel and opium administered so as to produce slight salivation, the bubo had nearly disappeared, and the chancre was improving, when he left the Hospital of his own accord to spend Christmas at home. He came back in a fortnight, January 7th, 1847, with the bubo returned and worse than before; large, prominent, seated in a firm, solid, but not deep-seated base; the integuments of a dull red colour, slightly œdematous, and fluctuation very evident: it was very tender, and he had darts of pain through it. The matter in this case was so near the surface, that some of the more advanced pupils who saw the case very fairly doubted the probability of its being put back.

8th. He was ordered frictions of a drachm of the strong mercurial ointment every night.

13th. The bubo has been enlarging, and fluctuation is more distinct. Mouth affected. Omit the frictions: and to have a compress wet with Lot. Acet. Plumb. applied over the bubo, and moderate compression by means of a spica bandage.

16th. Mouth very sore, but the bubo is smaller and paler, and the fluctuation of matter less evident.

23rd. The bubo not half its former size; presence of matter indistinct; integuments over it not discoloured; chancre nearly healed.

29th. Chancre healed; bubo almost disappeared.

He was kept in Hospital a few days longer, taking a blue pill each night, and five grains of the hydriodate of potash, with sarsaprilla, twice a day, but chiefly to complete the cure of a very close stricture which he laboured under. When he left Hospital, a little hardness pointed out the place where the bubo had been.

I did not select these cases, but I took them as the three

last examples that occurred of suppurated bubo discussed by treatment, in three weeks or less. Although I by no means deny that such buboes may be put back without the use of mercury, yet, as far as my experience goes, not in so short a time, nor with the same likelihood of success. I would go even farther, and say that, besides being the shortest and surest way, and the most likely to prevent the occurrence of secondary symptoms, it is also the best as regards the general health of the patient. From the very large number of syphilitic cases I have had to treat since my connexion with the Richmond Hospital, I have *invariably* found a mild mercurial course followed by improvement in the general health; pale, sallow, thin persons have gained flesh, become stronger, and healthier in appearance. A gentleman, to whom I proposed mercury for the cure of an indurated chancre, said that his only objection to taking mercury was that it afterwards made him so fat. I have repeatedly observed this in other cases. Great praise is undoubtedly due to those gentlemen (among whom Mr. Carmichael holds so high a position) who first directed attention to the injurious effects arising from the lavish and indiscriminate use of mercury, which was so general some years ago. Their observations not only checked the abuse, but also led to a more careful use of the remedy. But perhaps it is not too much to say, that many of their followers have pushed the doctrines of these reformers too far, and have, no doubt, gone into the other extreme; not possessed of the same extended knowledge of the venereal disease, and filled with vague undefined terrors of mercury, of which they have had little practical experience, they take the symptoms of the disease in bad constitutions for the effects of the medicine, and have applied terms of reprobation to the use which should have been only levelled at the misuse of the remedy. There are constitutions in which the syphilitic poison acts with peculiar virulence; in these, soft nodes, caries of the bones, the worst kind of tubercular eruptions, venereal ulcers,

rupia, the serpiginous ulceration, destructive sore throat, with many other intractable forms of disease, wear out the patient through a long series of years. If mercury has been taken, this train of evils is laid to its charge; and though violent or protracted mercurial courses are in such cases very injurious, yet I really believe in the majority of instances mercury has nothing to say to the production of the symptoms. Very recently, a young woman was under my care in the Richmond Hospital, with tubercular eruption, chiefly on the extremities, and some of the worst secondary venereal ulcers, circular, large, deep, sloughing, and phagedenic, that I have met with,—exactly the case in which the malignancy of the symptoms would have been attributed to the previous mercurial treatment,—but she had never taken any mercury. True mercurial affections are, in my opinion, very rare,—the constitution being more to blame than the medicine. At present there is a young man in the Hospital with strumous sore throat; the whole of the hard palate full of irregular ulcers, the soft palate extensively destroyed, the uvula gone, the back of the pharynx ulcerated, and covered with yellow, slimy matter. It is precisely the throat so often observed with tertiary venereal nodes; and, if mercury had been taken, would have been set down, by some, as a sore throat in a person run down by mercury; yet this young man never had syphilis, nor ever took mercury; but when younger had lupoid ulceration of the right arm, the large, irregular, white cicatrix of which is still visible. How extensively is mercury now administered for diseases of the lungs, eyes, brain, liver, and the fibrous and serous membranes; and yet when do we meet with the sequelæ, the mercurial affections of the bones, throat, eye, &c., so terrible to the imagination of many non-mercurialists? I have, therefore, no hesitation in giving mercury in cases of suppurating bubo, on the score of injuring the constitution, because, I repeat, it is my belief that a carefully conducted mercurial course has the very contrary effect, and that the health is much more likely to suffer from vain, long-continued non-

mercurial efforts, during which a most virulent animal poison is allowed to fix itself in the system. Even if the bubo is not put back by the treatment, but, after the patient has been sufficiently affected by the medicine, still continues full of matter, I think I have yet observed this good effect, that, the specific action in the bubo having been removed, it has become a simple abscess, and when opened healed up rapidly, as a common phlegmonous abscess would do. Sometimes a bubo has been already opened before the case is presented for treatment, or has opened of itself; sometimes the pain is so severe that the necessity of letting out the matter becomes urgent. When obliged to make an opening, I am usually decided in my mode of doing so by the kind of bubo. Suppurated buboes generally present themselves in two forms, either in an oblong tumour over the centre or inner third of Poupart's ligament, superficial and freely fluctuating from one end to the other, the integuments red and thinned nearly equally over the whole swelling, with nothing like well-marked pointing. It is best to open this bubo through its whole length; all matter is at once let out; there is no subsequent lodgment or chance of burrowing; and the wound, though at first large, quickly contracts.

The second form is rather more deep-seated, of a rounder shape, with a hard base, the fluctuation in the centre, and there is more decided pointing. Here I believe that opening with the caustic kali is most beneficial, allowing, when the slough separates, a free exit to the matter, and setting up a change of action in the part which tends to the dissipation of the indurated basis. After a bubo is opened it sometimes heals up in a few days, like an ordinary abscess; this is most common in the superficial variety, but in other cases the most anxious part of the treatment only then begins. I shall not dwell on the tendency which buboes have to burrow and form fistulous trajets under the skin and fascia, which unless at once slit up, naturally protract the healing of the sore: but it often happens that, a few days after the opening the wound

assumes all the characters of a syphilitic ulcer; the surface becomes covered with a yellowish exudation, the edge is red, raised, and distinct, there is a dull red areola, and the discharge is thin. Now it has appeared to me that for the proper treatment of such a sore, it is most important to ascertain decidedly, if possible, whether what *seems* to be a syphilitic ulcer is really so; and this, I think, is best accomplished by the test of inoculation. If the syphilitic nature is proved, mercury should be administered, and the black wash applied locally. As soon as the mouth becomes affected, the sore assumes another aspect, the yellowish exudation is thrown off, and a granular surface replaces it; the edges fall in, and cicatrization is generally rapid;—whereas simple local remedies, nitrate of silver, or ointments, &c., have extremely little effect on such sores, some of which I have seen, at the end of four or five months, rather on the increase, with all the signs of chancerous ulcers, and producing specific ulcers on inoculation.

Large chancrous bubo; inoculation producing a specific sore.—Michael Rock, ætat. 26, admitted October 14th, 1846. He became first infected with a chancre on the prepuce, about the 20th of June; it did not heal for ten weeks. A bubo appeared a month after infection, became of considerable size, suppurated and opened the beginning of September, when he first used mercury, rubbing in five times; his mouth became sore, and he discontinued it; the bubo got worse, but the chancre healed. At present there is a large and irregularly-shaped ulcer occupying the inner half of the left groin, its inferior angle extending a little downwards between the thigh and scrotum; the edge red, raised, uneven, and undermined; the surface very irregular, having a few pale granulations, but generally covered with a yellowish grey exudation. It closely resembles a large chancre, and is three inches long by one and a half inch wide.

18th. He was inoculated in the thigh with the matter from the ulcer.

21st. The two punctures had formed vesicles filled with serous pus. They afterwards became two perfectly formed chancres, and on the 24th, he was ordered Hyd. c. Cret. with opium three times a day.

28th. He was salivated November 2nd. The ulcer was reduced two-thirds of its former size; but after this the healing was protracted by some burrowing at the lower angle, between the thigh and scrotum, and by an attack of erysipelas, at that time prevalent in the Hospital. He was dismissed, cured, and greatly improved in health and general appearance, on the 27th December.

I have applied the same test to other cases of ulcers remaining after the opening of buboes, with a like result, but in none where the sore was of such extent. In one case, the matter taken the day after the opening of the bubo produced no effect, but in the course of a few days, a large gland was seen in the centre of the opening, it became larger, and fluctuation shewed it to contain matter, this was discharged, and inoculation with it produced a specific pustule and ulcer. We might be led to expect this when we consider, that a bubo is formed by the presence of the virus in one of the lymphatic glands causing it to inflame and suppurate; the inflammation spreads to the cellular tissue, external to the gland, where suppuration also takes place. Where there is no communication between the matter within the gland and that external to it, the latter is non-virulent, and consequently gives a negative result on inoculation. M. Ricord has noticed this fact. The following case will shew that reliance cannot and should not be placed on the appearance of the wound alone:

Patrick Whelan, admitted into Hospital, March 10th, 1846, with a bubo in each groin over Poupart's ligament; the left very large, prominent, oval, red, and fluctuating; the right the size

of a small apple, harder, and fluctuation indistinct, but with a pink apex. Two months ago he contracted a sore on the corona glandis, it healed in six weeks, leaving scarcely any cicatrix; the bubo in the left groin appeared a month after infection; and soon afterwards the other presented itself.

13th. The left bubo was opened freely with a bistoury, and that on the right side with the potassa fusa, the slough separated in three days, and discharged a quantity of pus.

21st. In the centre of the wound in left bubo, an enlarged gland appears, the size of a filbert; it has suppurated in the centre, a probe being readily moveable within it. There is a similar gland in the right side, but it is still hard. A compress and spica bandage were ordered. 26th. A little burrowing under the integuments in the right bubo, which was laid open.

April 7th. The wounds of both buboes have assumed a chancrous appearance, and he was inoculated in two places on the thigh, but without result.

17th. The gland in the right bubo was opened, and he was inoculated with the pus contained in it, but without producing a specific pustule or ulcer. Under local treatment alone, the application of the Lot. Acet. Plumbi, and the occasional use of caustics, the buboes healed up as rapidly as could be expected, considering the presence of the enlarged glands, which always render the progress more tedious. He left hospital well six weeks after the opening of the buboes.

This case shews the value of the test of inoculation, for had I been guided by the chancrous appearance of the bubo alone, I should have put this man under a course of mercury unnecessarily; whereas the failure of the inoculation, both from the open bubo on the 11th, and from the interior of the gland on the 17th, proved that I had to deal with a non-virulent bubo, and he got well by simple treatment alone.

A man named Thomas Quinan was admitted on the 1st of January, 1847, with a very large suppurated bubo. He was inoculated with the matter first let out, and subsequently with

that from the centre of a gland which appeared in the middle of the wound, but in both instances without effect. By simple local treatment, the lead lotion and compress, with the occasional application of lunar caustic, but without a particle of medicine, he left Hospital well, on the 29th of January, four weeks after admission.

I shall not trespass on the patience of my readers by adducing further evidence on this subject, but briefly sum up the conclusions to which the observations I have made induce me to arrive.

1. That after the opening of a bubo, the wound, instead of healing, may assume a chancrous appearance.

2. That the best way of ascertaining its real nature, whether it be virulent or non-virulent, is by inoculation.

3. That if inoculation produces a specific pustule and ulcer, the patient, besides careful local means, should be subjected to mercurial treatment, as the most effectual and rapid way of healing the sore, and ridding the constitution of the virus.

4. That if no specific ulcer follows inoculation, the wound of the bubo may be treated by simple local applications.

Art. IX.—*Observations on the Nature and Treatment of various Diseases.* By Robert James Graves, M. D., Corresponding Member of the American National Institute for the Promotion of Science, Honorary Member of the Grand Duchy of Baden Medical Society, &c., &c.

(*Continued from vol.* xx. *p.* 422, *of former Series.*)

UNUSUAL SEQUELÆ OF SCARLATINA.

The following case furnishes an instructive example of the difference which exists between an operation performed on a healthy and a diseased joint. In the last Number of this Journal my esteemed friend, Mr. Liston, published some "Remarks upon the Removal of loose Cartilages from the Joints,"

in which he describes a new mode of operating, worthy of this accomplished surgeon's skill. In speaking of Goyrand's operation, he says: "Here there was always a risk of the edges inflaming, of their not uniting, and of a suppurating track being thus established in connexion with the synovial cavity. Hence inflammation of the joint, destruction of the cartilages, and a cure (?) by anchylosis, or amputation of the member. This proceeding I practised long ago in some three or four instances: in the last, the patient nearly lost his life, and with difficulty was enabled to preserve his limb. I should be very sorry to repeat the process."

This forcible passage sufficiently displays the well-known danger of meddling with healthy joints. The annexed letter, which I received in March, 1845, from Doctor Bernard, of Dundrum, shews the comparative impunity attending operations connected with joints *where the synovial membrane is already in a state of chronic suppuration, brought on by a constitutional malady:*

"My dear Sir,—The following case is given from memory; but although more than two years have elapsed since its occurrence, the facts are indelibly impressed on my mind, and appear as fresh as if they were of recent occurrence.

"Martin Byrne, aged five years, living at Miltown, County Dublin, of a fair complexion and delicate frame, was attacked with scarlatina during the month of November, 1842: the tonsils were greatly inflamed and swollen, and required the use of the solution of nitrate of silver.

"About a week or ten days after the disappearance of the eruption, an uniform swelling, without any discoloration of the integuments, and accompanied with excessive pain, presented itself behind the right ear; in a short time it extended above the ear in one direction, and below the mastoid process in the other. As soon as the fluctuation became evident, I made a puncture in the centre of the swelling, and gave exit to about

an ounce of purulent matter, of thin consistence, of a canary yellow colour, and without any offensive odour. After a few days, matter escaped from the external meatus of the same side; the discharge from this outlet was always increased by pressure on the external abscess. As the first opening I made had a tendency to close, I made another incision lower down, over the mastoid process, which was kept open till the matter ceased to flow. Almost immediately another abscess formed at the back of the neck; this was opened, and matter discharged of a similar nature to that above-mentioned.

"The right elbow-joint was next attacked, commencing with great pain, and considerable constitutional disturbance. The pain was speedily followed by swelling, which attracted attention the sooner, owing to the attenuated state of the arm and fore-arm. As the swelling of the joint increased, the integuments around became thin and transparent, and traversed with an unusual number of veins. A sense of fluctuation soon became apparent, especially in the spaces between the olecranon process and the condyles of the humerus, in which situations the synovial membrane was protruded by the distending fluid. Judging from the character of the abscesses which formed about the neck, their progress, &c., I had little hesitation in concluding that purulent matter was secreted by the synovial membrane of the humero-cubital articulation, and distending its sac. As the hectic fever was daily increasing, and the poor boy becoming greatly emaciated, passing many nights without sleep, I made an incision between the olecranon and external condyle into the joint, and gave exit to not less than two ounces of purulent matter, in every respect similar in consistence and colour to that which we have before described as having been discharged from the ear and neck. The joint became now greatly diminished in size, the patient experiencing much relief. A linseed meal poultice was ordered to be applied around the joint, and the arm to be kept quiet. The matter continued to exude from this opening for a fortnight

or three weeks, when the left elbow-joint became similarly affected, and was lanced in due time, giving vent to a quantity of matter, resembling in character that which was discharged from the other elbow. Many weeks elapsed before these joints were restored to a healthy state.

"The treatment adopted at this period consisted of tonics, and any nourishing diet which the child wished for. He, for the most part, refused to take wine and broths, and was principally supported by cow's milk, of which he generally took from three to four pints every day.

"In a short time another abscess formed over the sacrum; when mature, this was also lanced, and, after discharging purulent matter for a week or ten days, gradually closed up.

"I now began to flatter myself that my little patient would be relieved from further suffering, and that, although reduced to the greatest state of exhaustion and emaciation, he would soon recruit his lost strength. However, to my great disappointment, new symptoms presented themselves in an unexpected quarter. He now complained of most acute pain in the right lumbar region, which completely destroyed his rest at night, and rekindled fever in the system. The pain was speedily succeeded by fulness of the abdomen on the same side, which increased gradually, accompanied by great distress. Suddenly a small tumour, about the size of a Spanish nut, made its appearance in the corresponding groin, beneath Poupart's ligament, and external to the femoral vessels: it soon increased to the dimensions of a pullet's egg, giving a distinct sense of fluctuation. From the mode of its formation and progress, I concluded that I had a psoas abscess to deal with. As the former operations were attended with so much success, and afforded so great relief to the patient, I resolved to open this abscess likewise. Some days, however, elapsed before the parents of the child would give their consent. I now made a valvular incision (as recommended by Abernethy) into the lower part of the sac, and gave exit to not less than a quart of

purulent matter, of the same canary yellow colour, and resembling in every respect that which was discharged from the ear, neck, elbow-joints, and sacrum. I dressed the wound with lint and adhesive plaster, and after a few days allowed more matter to flow out. This treatment was continued from time to time, until the abscess contracted and ceased to discharge pus. From this time the boy commenced to regain strength, and the hectic fever to decline.

"A space of nearly eight months elapsed from the time this child was first attacked with scarlatina to the period of his recovery. I paid my little patient a visit during the present week. He appears in the enjoyment of good health: the right elbow-joint is, however, in a state of anchylosis, the fore-arm being permanently bent on the arm; (I repeatedly directed the parents to use passive motion, as the only means of guarding against this termination); he has, however, the use of the left arm, and walks well.

"I remain, my dear Sir, truly your's,

"H. Bernard."

In the next case, for the notes of which I am indebted to Dr. Percival Hunt, the fatal termination of the disease was quite unexpected, and awfully sudden. A *post mortem* examination was not permitted, but it is quite evident that the abscess had penetrated some large vessel, and thus occasioned violent hæmorrhage. The blood is said to have been dark, and, consequently, venous. As, however, no medical man was present when the unfortunate accident occurred, and as death seldom so speedily follows venous hæmorrhage, I am more inclined to believe that it was arterial: if venous, then the instantaneous manner in which death followed the first gush of blood must be ascribed to the regurgitation of atmospheric air into the heart.

"Miss W. H., aged seven years, of small make but healthy habit, was taken ill in Cork on 5th June, 1844. Her mother,

apprehensive of scarlatina (to the contagion of which she had been exposed), and anxious to have her under care in Dublin, brought her that night by coach to Abbeyleix. On the 6th she was pretty well; but on the 7th she had vomiting and sore throat, and was brought on to Dublin the 8th. That evening, on her arrival, she was in very high fever; skin burning, very red; tonsils slightly swollen, and exhibiting a few small patches of lymph on their surface.

"9th and 10th. Fever continued high, although she had been freely purged with sulphate of magnesia, and leeches had been applied to the external fauces. The right side bled freely, the left not so well.

"11th. Fever still high; lymphy transudation on both tonsils; much greater in quantity on right than left side; right side of throat externally much swelled; left but very little.

"12th. Right side of throat greatly swelled externally, so as almost to obliterate the angle of the jaw; secretion on internal surface was much increased; left side scarcely swelled at all; other symptoms as before. Given minute doses of tartar emetic.

"13th. Dr. Graves saw her. The internal fauces and uvula coated over with lymph; thicker on right side than left; external tumefaction of right side greatly increased, extending down to chest, very hard, tense, and shining; felt so hot she could only bear a single sheet over her. Tartar emetic solution to be continued; internal fauces to be washed once daily with a ten-grain solution of nitrate of silver.

"16th. Tumefaction has been lessening, and becoming more defined every day since last report, although still hard; internal fauces still thickly coated with lymph: she is more sprightly. Dr. G., who has constantly seen her since yesterday, ordered a poultice over the tumour. The tartar emetic purged her so freely as to oblige its being discontinued.

"On 17th, tumour became soft, and next day was opened, when a large quantity of pus flowed out. The poultice was continued, and she was given broth.

"She continued to improve in every way, the abscess discharging freely, and lymphy secretion of fauces separating until the morning of the 20th, when, suddenly, after taking a drink, a gush of dark-coloured blood filled the abscess, and flowed out from its orifice: in a few seconds she was dead.

"N. B.—It is to be observed, that the right side was throughout more affected than the left. The leech-bites bled more freely on that side; there was more lymph internally, and more tumefaction externally. The lymph internally and tumefaction externally appeared to proceed *pari passu*."

EPILEPSY.

Dr. Blackmore, of Bath, published a valuable series of papers on nervous diseases, in the London Medical Gazette (March and April, 1845). At p. 922, he remarks that "epilepsy has been brought on by a sudden depletion of the vascular system." I saw, in 1843, a case confirming the accuracy of this observation, and which appears worthy of being recorded. A clergyman in the King's County, of active habits and slender frame, had been liable to occasional attacks of epistaxis from his boyhood until the age of thirty, when a bleeding more copious and obstinate than usual came on in the evening. His brother, a very intelligent medical practitioner, happened to be in the house, and, having found other usual remedies inefficacious, proceeded to draw blood from the arm; this was done *ad deliquium*, when the epistaxis ceased; but while he was still in the faint, convulsions took place, and were observed to be of unusual violence, and to partake much of an epileptic character. He got well in the course of a quarter of an hour, and slept tranquilly during the night. On the following day he was attacked with decided epilepsy, and has continued ever since a frequent sufferer from the disease. I may here take occasion to remark incidentally, that I have found *dry cupping* to the nape of the neck a most valuable auxiliary in the treatment of epistaxis.

CHOREA.

In the former series of this Journal(*a*) I entered into some details respecting the best means of removing this disease. Since that time, I was induced by the reported beneficial effects of sulphate of zinc in certain spasmodic diseases, whether of an hysterical or of a truly epileptic nature, to try its efficacy in chorea, and I can assert with confidence that no other single remedy is so generally useful. In several severe cases it has, without the aid of any other medicine, cured the patient speedily and perfectly. In one case, which I saw with Mr. Barker, it failed altogether, and so did everything we tried, except opium; which, however, was only useful in so far that it procured sleep at night, without which the patient, a boy of thirteen, must have been speedily worn out, so violent and continued were the spasmodic motions of the affected limbs. In the case referred to, time gradually brought about recovery. The sulphate of zinc may be given simply dissolved in rose-water, in half-grain doses, repeated often in the day. When *tolerance* of the salt on the part of the stomach is obtained, it will be often borne to the amount of ten or fifteen grains in the day; but we must always study its effects, and use the smallest quantity that will ensure a cure.

Authors who have written on the subject of chorea agree in stating that it very seldom persists after puberty. "We see little of it," says Dr. Blackmore, "in adults, yet it will sometimes *continue* for the whole life." It appears plain, from this observation, that Dr. Blackmore had never witnessed the first access of chorea at an advanced age, and consequently I think it right to mention that Dr. Ireland consulted me formerly respecting the late Mr. Dyas, a respectable apothecary residing in Castle-street, who, when seventy years old, was attacked by chorea in as uncomplicated a form as I ever saw. The disease was very severe, and lasted many months.

(*a*) Vol. ix. p. 402.

Thus do diseases of the nervous system, like the waning intellect, affect a second childhood!

PSORIASIS, SYCOSIS, TINEA.

Early in the year 1846, my friend Mr. Pakenham, of Henry-street, consulted me respecting a young clergyman who was annoyed by a redness occupying the skin of the upper lip. This redness was permanent, but liable to certain remissions and exacerbations, dependent on the state of the weather or the effects of diet. It was accompanied by a slightly elevated state of the engaged portion of the skin; but it had not the elevated pimples of acne, or the suppurating tubercles of sycosis. It might, perhaps, be termed psoriasis labialis, and, when much inflamed, secreted an increased quantity of epidermis. It annoyed him much, and prevented him from using his razor with comfort. He was very anxious to have this disfigurement removed, and had made use of many remedies, both general and topical, without benefit. As the disease had lasted several years, and had resisted all the remedies which had been tried, both by London physicians and myself, I advised him to go to Aix-la-Chapelle for the purpose of using the sulphureous waters. The German physician whom he consulted there considered that the disease depended upon a strumous origin, and directed him not to use the waters, but to try a course of cod-liver oil. This remedy agreed well with his constitution, and after some time he was able to consume two ounces of it daily, which, in about two months, effected a complete cure. That the German physician took a correct view of its nature I have no doubt, as several members of my patient's family have suffered from scrofulous diseases. It may be well to mention that the cod-liver oil was made into an emulsion with syrup, mucilage, and orange-flower water, in which shape it is comparatively palatable.

Since this occurrence I have often had success in the treatment of local diseases of the skin which I suspected to depend

on a scrofulous taint, and have thus cured obstinate cases of sycosis, impetigo, and psoriasis. I may add that, in all such patients, I have combined with the internal remedy the insertion of one or more issues at a distance from the part of the skin affected; and in sycosis I follow Alibert's plan of maintaining an eruption on the arm with tartar emetic.

In certain diseases of the skin, particularly those allied to psoriasis, I have found the use of gelatine baths of the greatest possible service. Two gallons of size may be added to each warm bath for an adult, or, if the odour of even fresh size is objectionable, a similar quantity of isinglass, or calf's foot jelly, may be used. A course of such baths, particularly in summer, will be found a most valuable auxiliary in curing dry and scaly diseases of the skin.

A patient of mine was affected with psoriasis of the scalp for several years. It was extensive but not severe, and did not interfere with the growth of the hair. He sought no remedy until it encroached on the forehead and thus disfigured him. He was cured by using hot air sulphur baths for fifteen or twenty minutes daily for a month, and applying the following ointment to the roots of the hair every night at bed time: Biniodide of mercury, one scruple; prepared lard, one ounce; oil of lemon, five drops. An oil-silk bathing cap was worn at night, and the ointment was not washed out in the morning.

On a former occasion I have spoken of the utility of lotions of nitrate of silver applied to the scalp in tinea capitis, and I think it now right to add, as a caution, that a solution of ten grains to the ounce, rubbed over the affected spots with a camel's hair pencil, produced in one little girl a sudden inflammation of the whole scalp, causing many sloughing boils and such a morbid process as, it is true, perfectly cured the original disease, but, for the time, totally destroyed the hair on many parts of the head. After two years, however, the hair again grew partially upon these spots, and at the present moment the new crop appears so much on the increase, that I am in hopes

the deformity will be but partial. Since this untoward occurrence, I always commence the treatment with a much weaker solution.

In cases of psoriasis of the scalp and ears, back of the neck and forehead, cases which are often of an extremely obstinate and troublesome character, and occur frequently in young females, I have seen Sir P. Crampton adopt with success the following treatment:—A sixteenth of a grain of corrosive sublimate, dissolved in half a drachm of spirit of wine, is to be taken three times a day, in four ounces of a mixture, composed of equal parts of infusion of yellow bark and decoction of sarsaparilla, together with Donovan's Liquor Cinchonæ, and the fluid extract of sarsaparilla. Along with this internal treatment, he advises the application to the parts of dilute citrine ointment, with the addition of about one-third of the Unguent. ceræ albæ. The above internal remedies are often useful in scrofulous ophthalmia. The late Dr. Colles likewise used the corrosive sublimate in this affection, both internally, and as a lotion externally, dissolved in spirits of wine.

CHRONIC FURUNCLES.

I have obtained permission from my friend, Dr. Orpen, of Cove, to publish the following particulars of a disease of the skin to which he became subject, and the symptoms of which his letter accurately details:

"My dear Sir,—I would feel much obliged by your giving me your opinion on a very painful and troublesome furuncular affection I have been subject to for some time. The first attack I had of it, which is nearly five years ago, came on my hands and wrists, and I attributed it to some matter that got on my hands while dressing a case of phlegmonous erysipelas of the scalp, attended with *profuse* suppuration. That attack lasted three or four months. I had another severe attack last year after attending a bad case of sloughing

phagedæna of the penis, scrotum, and groin, from primary syphilis. I was not aware that I had any cut or scratch on my finger at the time; I used the greatest caution in touching the sore, and did not cut myself at the time; still I had a very painful eruption of boils afterwards, which lasted three months. I had a third attack last summer, and I am now suffering from the fourth!

"The eruption is more a purple hard tubercle, than a pustule or boil; in some very bad ones they are preceded by a small vesicle, with a white areola about the size of a sixpence or shilling, in which case there is some deep suppuration afterwards; but they generally suppurate very slowly and imperfectly.

"I intended to have consulted you about it when in Dublin, but as I was free from them at that time, I did not wish to trouble you; but this eruption is now becoming more frequent, and appears to be brought on by anything that irritates the skin: a hard ride on horseback is generally followed by several of them. I have tried various remedies, such as mercurial alteratives, with soda; sarsaparilla, and Brandish's Solution; and quinine (which gave me a headach); I have frequently cut them across with a scalpel, or applied caustic to them, which prevents *some* from suppurating. I was advised to use calomel and James's powder in small doses, with spare diet, which relieved me at the time, but the eruption returned soon after. I was also lately recommended tonics, with porter and nourishing diet; which latter,—I mean the porter and full diet,—generally bring on headach, so I am afraid of them.

"I have also consulted your most valuable work, expecting to find the same consolatory advice that I have so frequently had from it in fevers and other cases, but I did not find any case exactly corresponding to my own. I have, therefore, taken the liberty of applying to you directly, and laying this statement of my case before you. Let me know particularly as to diet. I used to be very dyspeptic, but of late I feel myself in

better health and spirits, only that I am so much annoyed by these *boils*, *pustules*, or *tubercles*. My pulse used to be 75 to 80; it is now 60.

"I am, dear Sir, your's most sincerely,

"Thomas H. Orpen."

I advised Dr. Orpen to try the following prescription, recommended by Dr. Erichson in the Medical Gazette of November 14th, 1845: Liquor of caustic potash, one ounce, and half an ounce of bicarbonate of potash, in seven ounces of water. One table-spoonful to be taken twice a day in half a tumblerful of nettle tea, and the dose to be gradually increased until an ounce is taken at a time. Dr. Orpen persevered for a considerable time in the use of this remedy, occasionally intermitting it, and was at length completely restored to health. He used, by my advice, a generous but not heating *diet*. With respect to inoculation of the system by means of morbid animal matter, I have seen frequent instances of it in cases where such inoculation was new to me. A young lady had erythema nodosum of her legs, some of the tumours of which, being neglected, and irritated by friction, ran into superficial pustules. Her mother opened some of these with a needle, and, during the operation, a drop of the fluid fell upon the back of her middle finger. In ten minutes after she felt a tingling and painful sensation in the unbroken skin of the part, which she had merely wiped and not washed, being entirely occupied with her daughter. The spot soon became inflamed, and next day an angry pustule, exactly similar to those on her daughter's legs, formed on the finger.

PITYRIASIS.

No author with whom I am acquainted has given a more accurate description of this disease, when it affects the trunks and extremities of adults, than Mr. Plumbe(*a*). In addition to

(*a*) See Practical Treatise on Diseases of the Skin, 4th edit. p. 243.

the remedies he recommends for the constitutional treatment of this affection, I may mention the local application of tincture of iodine, in the manner recommended in tinea capitis. It is right to observe, that when any solution, whether of sulphate of copper, nitrate of silver, or the tincture of iodine, is to be applied to the scalp or to the skin, it ought to be done, not with a camel's hair pencil, but with a brush of hogs' bristles, such as house painters use, the brush portion being about the thickness of the middle finger. This renders the application at once more speedy and efficacious.

COD-LIVER OIL IN STRUMA.

Having mentioned the use of cod-liver oil in the strumous diathesis, I avail myself of this opportunity of corroborating the testimony of those (and, among the rest, of Dr. Bennett) who have extolled the use of this medicine in strumous diseases in general. I have seen it do what I never saw any other remedy effect, i. e. reduce to the natural size amygdalæ that were enlarged from the period of extreme youth. A most remarkable instance was that of a young lady, aged about 19, whose amygdalæ were as large as small wallnuts, and which I treated without effect for two years, both by iodine internally, and nitrate of silver locally. A three months' course of cod-liver oil left no trace of the disease behind. Under the influence of this oil the enlargement of the cervical glands in young persons of a scrofulous habit frequently disappears, and the tendency to the formation of phthisis and the recurrence of strumous hæmoptysis is occasionally overcome. In persons of a consumptive tendency I consider this as a valuable addition to our remedies.

Having mentioned the spitting of blood that so frequently forms the first obvious symptom of consumption, a remarkable case is brought to my memory which I saw along with Dr. Stokes and Mr. Corr. It was that of a young man, a partner in an extensive manufactory in this city, who was

attacked on his birth-day with a spitting of blood. The disease did not recur until his next birth-day, and thus he was attacked for several successive birth-days. The last hæmoptysis ushered in the usual train of symptoms attending on galloping consumption. The recurrence of the symptoms on his birth-day evidently arose, not from any real periodicity in the disease, but from nervous and vascular excitement produced by apprehension.

HAIR—ITS STRUCTURE AND DISEASES.

Physiologists are agreed that the hair consists of matter somewhat analogous to horn or nail, secreted by a vascular sac imbedded in the skin, and sometimes reaching as far as the subcutaneous tissue. There is reason to believe that this sac is abundantly supplied with nervous matter, and embraces within it the bulb-like root of the hair, which is now generally thought to be of a homogeneous texture, and not tubular or hollow in the centre. The colouring matter of the hair is said to be diffused through its substance ; and most authors are of opinion that the hair, once formed, is then placed beyond the reach of any change connected with the organism. The phenomena of plica Polonica seem difficult to reconcile with this hypothesis, and my observation that hair, generally speaking, grows grey first at the tip,—the want of colour proceeding from the point towards the root,—seems to establish the contrary supposition, and proves that the hair, during its growth at least, is an organized body, endued with vitality, or otherwise it could not happen that colouring matter once deposited through its texture could disappear. And the probability of this opinion is strengthened by the rapidity with which it disappears, for even a long hair, when the greyness at its extremity has commenced, becomes entirely grey in the course of a few days, the absorption of colour proceeding rapidly to its root. Examples, too, have occurred of an evident sensibility existing in hair otherwise healthy.

Some physiologists have attributed the colouring matter of the hair to the sebaceous follicles, which, they say, secrete an oil, by the combination of which with certain principles contained in the hair the colour is developed ; but, according to this opinion, the hair once dyed would not lose its colour in the manner I have described above. For practical purposes, then, we may consider the hair to resemble a plant imbedded in the surface of the body, and consequently its healthy or its diseased functions must be connected not only with changes occurring in the hair and its bulb, but with those which take place more immediately in contact with the latter. Thus the hair may cease to grow, and baldness ensue, as in old age, from decay and absorption of the bulb itself; or the same result may in youth be produced by causes which injure the vitality of the bulb, or change the structure of the skin in which it is implanted.

CASES IN WHICH GREY HAIR REGAINED ITS NATURAL COLOUR.

A field officer in a distinguished regiment had served for many years in tropical climates ; had undergone the fatigues of the Burmese and other subsequent campaigns in the East Indies, during which he contracted dysentery and fever, and various maladies peculiar to hot countries ; and finally, after many years' service, was obliged to return to Ireland for the purpose of regaining his health. When he consulted me he was worn and emaciated, and complained much of dyspeptic and nervous symptoms, with a constant tendency to bowel complaint. He was then forty-eight years of age, and his hair had, during a few years preceding, become quite white; while his forehead, parts of his cheeks, and back of the neck and shoulders, presented many large maculæ of a brown colour, nearly as deep as the areola round the nipple of a pregnant woman. In the course of four years he visited me again, having during the interval remained with the depôt of his regiment in England, and gradually regained his health under

the influence of regimen and his native air. On his second visit I scarcely recognised my former patient. He had become robust and healthy-looking, and the maculæ had altogether disappeared, while his hair had regained its original brown colour: not a single grey hair remained. The hair is now soft and silky, and has continued of its natural colour during the last two years ; but it is remarkable that the whiskers have remained white.

In the year 1837 I was called by Dr. Beauchamp to see a gentleman, aged 67, labouring under the then prevalent influenza. He was a strong, hirsute man, and his chest was covered with long white hair, which had been black in his youth. We blistered him on the chest, and when he recovered from the disease the hair on the part that had been blistered grew again, but was now quite black, and has continued so since. I need scarcely add, that he is very proud of this unexpected symptom of returning youth, and readily exhibits to the curious this portion of his chest.

In the year 1845, Mr. Daly, of Henry-street, consulted me in the case of a robust shopkeeper, aged about 35, who had a slight attack of apoplexy, followed by incomplete hemiplegia. As the disease exhibited a tendency to relapse, we judged it necessary to establish a permanent drain from the vertex, to which a blister the size of a crown-piece was applied, and the surface was made to discharge for several months by means of Albespeyre's plaster. When his recovery was complete, the blistered part was allowed to heal. I should have remarked, that this gentleman was perfectly bald on his forehead, vertex, and temples, and the skin of the scalp was smooth and shining. A few weeks after the blister was healed, a growth of hair took place, in the form of a ring, encircling the blistered surface at the distance of two lines.

Miss M., affected for many years with tinea capitis and psorophthalmia. The hair on the vertex had become quite grey, and there were several bald spots in the neighbourhood.

She was recommended by Mr. Wilde to use the common gas-water as a lotion to her head. After a long-continued use of the remedy, the hair grew on the bald spots, and both it and that on all the affected parts recovered the natural colour. This was the more remarkable, inasmuch as the parts of the head to which the remedy was not applied are still covered with grey hair. Mr. Wilde observed a similar restoration of the colour of the hair from the use of Donovan's brown citrine ointment.

Mr. B., aged about 35, when first seen six years ago, had hair of a greyish colour, from the intermixture of black and white hairs; the latter in comparatively very small number. He complained that his hair had been getting grey and falling out for some time previous, which he ascribed to bad health, consequent on impaired digestion. Twelve months afterwards the grey hairs had entirely disappeared, his health and strength having, in the meantime, much improved, chiefly by travelling.

Mrs. ——, aged 35, had a very severe attack of fever, after recovery from which her hair turned quite grey, and began to fall out. The head was then shaved, and the shaving was repeated several times, after which there was an abundant growth of hair of the original auburn colour.

Dr. Stokes has communicated to me the following fact relative to the hair, and which forms a singular exception to what is usually observed in phthisis. A young lady, of fair complexion and dark hair, became consumptive, and her luxuriant hair rapidly fell and deteriorated, being replaced by a thin, woolly, coarse crop. The tubercular disease proceeded slowly, lasting about fourteen months. About six weeks before her death, a new crop of hair appeared, if possible more beautiful than her original hair, and grew with such unexampled rapidity, that at the period of her death she had a splendid head of hair. Physiologically it is deserving of remark, that though this young lady had considerably emaciated in her body and limbs, her face and features preserved all the rotundity and

plumpness of beauty; the scalp, therefore, was, in all probability, by no means deficient in nourishment. The unexpected appearance of hair excited vain hopes in the breast of the poor patient and her friends, who could not be persuaded that this new product of life was but the forerunner of death.

A friend of mine, a practitioner of great experience, now residing in Athy, came to Dublin to consult me while this paper was in the press. He is seventy years old, and labours under various nervous symptoms, which commenced about two years ago with *hemicrania* of the right side of the head, attended with a singular and exquisitely painful affection of the right half of the scalp, which was as sore as possible to the touch, and each hair in it felt, as my friend expressed it, like a minute poniard implanted in the skin. Nothing could exceed his agony for four days and nights, during which he never closed an eye: at last a minute pustule, that soon desicated, appeared round each hair, and in a few days his scalp got well. During the height of the disease the engaged half of the scalp was red, but not erysipelatous. As far as I can understand this remarkable and rare case, it must be considered as an acute inflammation of the bulbs of the hair:—strange enough, it was not followed by a falling out of the hair.

Whatever opinion the reader may have formed as to the relative value of the various theories formed to account for the growth and colour of the hair, it seems clear that some practical deductions follow from the foregoing facts. In the first place, it is evident that the growth and colour of the hair may be most beneficially influenced by the application of stimulants to the skin; and it is more than probable that numerous cases of baldness and want of colour would yield to such an application of stimulants, if we only knew how to proportion the quantity of stimulants to the exigencies of each individual case. There is here a difficulty, probably insuperable, but which still we should try to surmount. Certain it is that many popular remedies which enjoy a great reputation, contain a combi-

nation of oily and stimulating substances, such as castor oil, goose-grease, and tincture of cantharides. This composition, with the addition of a little sweet-smelling essential oil, often exerts, in my opinion, a decidedly beneficial effect when rubbed into the roots of the hair by means of a piece of flannel. The quantity of the tincture of cantharides should not exceed ʒi. to ℥i., and our object should be by each application to produce a slight evanescent redness while the skin remains anointed with oil. When it is believed to be essential to produce a rapid desquamation of the epidermis, short of vesication, I know no better means than painting over the surface with the tincture of iodine every third or fourth day. A good pomade for the hair consists of equal parts of castor oil and lard, with the addition of attar of roses, about eight drops to four ounces.

To many it may appear trifling and beneath the dignity of a practical physician to dwell so much on this topic; but in truth mankind have always attached much importance to this ornament of the human body; and grey hairs and baldness are to many quite as appalling as real disease, or even death. This feeling is not confined to the moderns, for we find the poets and the moralists of antiquity abound in passages to the same effect. The physician who has witnessed the strange degradation of appearance which follows the shaving of the female head in fever, must acknowledge that the grief of the ancient widow who laid her tresses on the tomb of her deceased husband(*a*), had at least a greater shew of poignancy than is exhibited by our modern ladies, who on these occasions partially conceal, but never destroy, this cherished ornament. And they are probably right, for the operation of natural causes renders the growth of hair slower than the decrease of sorrow. I was not aware of the great degree of beauty which the hair

(*a*) So in the Helena of Euripides, the heroine exclaims when about to similate the widow's garb:

ἐγὼ δ' ἐς οἴχους βᾶσα βοστρύχους τεμῶ, &c.

"I will go in, cut off these crisped locks," &c.

imparts, until Mr. Clibborn shewed me, in the Royal Irish Academy, a skull of a Peruvian female, in which the bones of the face and forehead were as usual exposed, but the desiccated scalp still bore a luxuriant crop of flowing ringlets, which imparted no small degree of beauty even to this death's head(*a*). I may here mention, that I once attended a lady upwards of eighty years of age, who exhibited all the usual appearances of withered senility, but who had a magnificent head of coal-black hair. Contrary to what might be expected, she bitterly deplored the circumstance, for this emblem of youth was but ill assorted with every other external sign of old age. "Two years ago," said my patient, "my maid, in combing me, discovered a grey hair. I was overjoyed, and hoped that others would speedily follow, but none have appeared since." She was the only person who ever asked me for a *receipt* to turn the hair grey.

We are aware that the least highly organized tissues are capable of being reproduced after being destroyed; now many facts have come under my notice which seem to authorize the conclusion, that when the original stock of bulbs has been destroyed in the scalp, a new stock is frequently manufactured by the powers of nature, and thus an entirely new crop of hair arises. It is well known that cases have occurred where supernumerary teeth have been produced; and, in the celebrated Countess of Desmond, it was asserted that when the adult set of teeth failed from old age, a rejuvenescence took place, and a third set of teeth appeared. I was always inclined to doubt the truth of this assertion until my friend, Dr. Curran, related to me the following particulars respecting his great-grandmother, Mrs. Waterworth. She had always been a remarkably healthy woman, was extremely active in her habits, and died, apparently of mere senility, aged ninety-five. When

(*a*) The mummy here referred to is now in the Museum of the Royal College of Surgeons. See Mr. Wilde's description of it in the "Parthenon," for the 15th of June, 1839, where the head and hair are figured.

about eighty, her sight, which for fifteen years previously had been so weak as to prevent her reading, became so completely restored, that at the time of her death she could, without spectacles, thread the finest needle, and read without fatigue or difficulty the very smallest print: she about the same time got a completely new set of teeth. The exact number of teeth that grew at this unusual period I have not been able to ascertain; but of the fact, as stated above, there can be no doubt. This rejuvenescence was not consequent on any change of place or habits, but it was accompanied by a very considerable increase of strength, which continued to the last. Dr. Curran has a very curious copy of Mr. Easton's valuable work on Longevity, in which the author has added in manuscript notes many interesting particulars respecting Mary How, of Mapleton, Derbyshire, who at the age of 110 got several new teeth, whilst her hair resumed its former colour; Peter Bryan, of Tynan, County Tyrone, who cut several teeth at the age of 117; Lady Angelique Domengieux de Sempe, of Nouiliac, in France, who got teeth at 90, and lived thirteen years afterwards; Margaret Melville, of Kelle, Fifeshire, who lived to 117, and got teeth at 100; John Minniken, of Maryport, Cumberland, whose hair grew so abundantly in his old age, that twenty wigs were made of it between his 80th and 112th year; and many similar instances, of many of which Mr. Easton was himself cognizant. These cases are, perhaps, not more extraordinary than that the costal cartilages should not have been ossified in the case of Old Parr, who lived to 152, a fact for which we have the authority of a committee of the Royal Society (among whom was the great Harvey) appointed to make the *post mortem* examination. As an example of a somewhat similar exception to general rules, Dr. Curran permits me to mention the case of his friend, Doctor Harrison, now a practising physician in the Isle of Man, who grew one inch in stature between his thirtieth and thirty-second year.

HAIR OF THE CARTHAGINIANS.

Much uncertainty prevailed as to what race of mankind the Carthaginians belonged, until the publication of a learned work by Gesenius on Phœnician Inscriptions. He has proved, as Dr. Prichard testifies, that the Hebrew is identical, or nearly so, with the language of the Canaanitish, or Phœnician people on the coast of Syria, and with the Punic of Africa. The Carthaginians must consequently have been allied to the Jews, and were therefore a long-haired people. This is shewn to have been actually the case by the following fact, recorded in the writings of Appian and Strabo, and thus recited by Rollin:

"The Consuls made no great haste to march against Carthage, not suspecting they had anything to fear from that city, as it was now disarmed. The inhabitants took the opportunity of this delay to put themselves in a posture of defence, being all unanimously resolved not to quit the city. They appointed as general, without the walls, *Asdrubal*, who was at the head of 20,000 men, and to whom deputies were sent accordingly, to entreat him to forget, for his country's sake, the injustice which had been done him, from the dread they were under of the Romans. The command of the troops within the walls was given to another Asdrubal, grandson to Masinissa. They then applied themselves to the making arms with incredible expedition. The temples, the palaces, the open markets and squares, were all changed into so many arsenals, where men and women worked day and night. Every day were made 140 shields, 300 swords, 500 pikes or javelins, 1000 arrows, and a great number of engines to discharge them; and because they wanted materials to make ropes, the women cut off their hair, and abundantly supplied their wants on this occasion."

The Tyrians who founded Carthage became very numerous, and therefore did not, like many other Greek and Phœnician colonists, lose, in the progress of time, their native language. They found it, however, necessary to learn also the vernacular tongue of the Numidians, among whom they set-

tled; and for that reason Virgil, no doubt, as Mr. Hodgson(*a*) observes, calls them "Tyrios bilingues." Now modern researches have proved that the Berbers of Northern Africa are the descendants of the ancient Numidians; and therefore the latter were by no means Negroes, but had long hair and a tawny complexion. As the ancient Numidians occupied many, if not all the littoral provinces of Spain, where to this day evident traces of the Berber language exist, especially in Biscay, we can now understand how it came to pass that the Carthaginians experienced no difficulty as to language when they subjugated Spain, and marched towards the Alps and Italy. Thus the two greatest intellects of antiquity were developed in individuals of different races, but both Africans: Hannibal belonged to the Caucasian, Æsop to the Negro type.

Art. X.—*Observations on Placenta Prævia; with Cases.* By Alexander Tyler, M.D., Lecturer on the Theory and Practice of Midwifery in the Original School of Medicine, Peter-Street.

[Read before the Dublin Obstetric Society, and the Harveian Society, London.]

The ancients appear to have been fully aware of the great danger attendant upon all hæmorrhages in the latter months of utero-gestation. Hippocrates says, "that the after-burden should come forth after the child; for if it come first, the child cannot live, because he takes his life from it as a plant doth from the earth."(*b*) But as to the causes or treatment of such, little seems to have been known until the commencement of the seventeenth century.

Guillemeau, a favourite pupil of the distinguished French surgeon, Ambrose Paré, in his work entitled *Le Moyen de secourir la Femme quand l'arriere faix se presente le premier*, published early in the seventeenth century, argues

(*a*) Vide Wilde's Narrative, second edition, page 143; and Appendix, pp. 609, 613.

(*b*) *De Morbis Mulierum*, book i.

strongly in favour of the operation of turning, as the safest treatment for both mother and child in all cases of flooding in the latter months. There is considerable difference of opinion as to whether he and his contemporary, Mauriceau, were aware of the placenta being sometimes originally implanted on the os uteri. Dr. Lee(*a*) seems to think they were; however, the quotations he gives in favour of that opinion are not sufficiently clear, in my estimation, to prove their knowledge of that most important fact.

De Graafe, according to Renton(*b*), was the first to state distinctly that the placenta may be attached to other parts of the uterus besides the fundus. He says, in his work on females, "Dicendo certum ac determinatum placentis locum haud assignare posse."(*c*) It appears from this quotation that he was aware of the placenta not having any fixed point of attachment to the uterus. But it was left for Paul Portal, in 1672, to shew that the original situation of the attached placenta, in these cases, was at and around the cervix uteri, as the following passage from his work clearly proves: "*Je glissai mes doigts dans les orifices ou je sentis l'arriere faix qui se presentoit et qui bouchoit l'orifice de la matrice de tous cotez avec adherence en toutes ses parties, excepté par le milieu qui se trouvoit divisé jusques a la membrane laquelle n'etant pas ouverte, n'y les eaux ecoulées, j'eus beaucoup de facilité a tourner l'enfant.*"(*d*) Again, in another part, he says, "*en la glissant je sentis le placenta qui environnoit en dedans l'orifide interne.*" These extracts alone, I think, are sufficient to shew the correct knowledge possessed by Portal as to the true seat of attachment of the after-birth in placenta prævia.

Giffard(*e*) was the next to publish cases in corroboration of the views adopted by Portal, and to express a doubt as to the opinion, even then generally entertained, that the placenta,

(*a*) Edin. Med. and Surg. Jour. April, 1839, p. 389.
(*b*) Idem. July, 1837, p. 244. (*c*) *De Mulierum Organis*, p. 291.
(*d*) *Portal's Traite des Accouchemens*, 1685.
(*e*) Cases in Midwifery, by W. Giffard, 1734.

when found at the os uteri, was loose and unattached. In concluding the history of Case No. 115, he observes: "I cannot implicitly accede to the opinion of most writers on midwifery, which is, that the placenta always adheres to the fundus uteri, for in this, as well as many former instances, I have good reason to believe that it sometimes adheres to or near the os internum, and that the opening of it occasions a separation, and, consequently, a flooding." Again: "In this case the placenta adhered, and was fixed close and round about the cervix uteri, as I have found it in many other cases, so that upon a dilatation of the os uteri a separation has always followed, and hence a flooding naturally ensues."

The next writer on the subject who has a claim to be noticed is Rœderer of Göttingen, who, in his *Elementa Artis Obstetricæ*, published in 1753, gave the clearest and most complete description of placenta prævia then published. About the same period Levret published his views upon the subject of uterine hæmorrhage depending on the implantation of the placenta over the os uteri, and to these two eminent men are the Continental schools unquestionably indebted for having given them a complete and correct explanation of the subject.

Among our own countrymen, Sir Fielding Oulde, in 1742, gave the history of a case of placenta prævia at the full time, where he turned the child, and saved both it and the mother; but he, like most of his contemporaries, fell into the common error of supposing the placenta to have been loosened from its original seat of attachment, and, being separated, to have glided into the cervix uteri.

Smellie, in 1752, thus observes: "The edge or middle of the placenta sometimes adheres over the os internum, which frequently begins to open several weeks before the full time; and if this be the case, a flooding begins at the same time, and seldom ceases entirely until the woman is delivered."(*a*) Lastly, I have to notice an author whose name is familiar to us all, as

(*a*) Vol. i. p. 143.

being the first to draw the immediate attention of the profession in this country practically to the subject, I mean Dr. Rigby, of Norwich, whose classic essay on uterine hæmorrhage appeared in 1775, and, within a few years, not only attained a wide circulation at home, which the numerous editions called for fully attest, but was also translated into the German and French languages; and, notwithstanding the previous publications of Rœderer and Levret, circulated extensively in those countries, sufficiently proving the value set upon the work; and although published subsequent to those of Rœderer and Levret, I think it is unjust to accuse him of borrowing his ideas from them, as it appears he was totally unacquainted with the writings of the former, and it was not until after the first edition of his treatise was at press that Levret's dissertation on this subject fell into his hands.

Placenta prævia is now generally ascribed to the ovum escaping through the Fallopian tube into the uterus before the decidual membrane lining that organ has acquired a sufficient degree of firmness and tenacity to arrest the ovum at the mouth of the tube, and thus permitting it to descend to the cervix uteri at once, as must inevitably be the consequence in all cases, only for this provision.

Dr. Radford, of Manchester(*a*), describes the membrana decidua as consisting of two layers: first, an outer, which is lost at the Fallopian tubes and os uteri; and, secondly, an inner, which stretches across these openings. Thus, when the ovum descends, it is arrested at the mouth of the Fallopian tube by the inner layer; in his own words: "At this early stage of gestation there is no funis umbilicalis, the embryo, in appearance like a small speck of mucus, being attached immediately to that portion of the ovum which enters the uterus last. The consequence of this arrangement is, that the part of the ovum most distant from the embryo is in contact with and carries forward the inner layer of the decidua, whilst the portion of the fœtal membranes with which the embryo is connected is

(*a*) Pamphlet, and Lond. Med. Gaz.

immediately applied to the more vascular outer layer; and hence the placenta is found in all natural cases a little to one side of the fundus uteri." Now, he supposes that when the inner layer is deficient, so as to allow the ovum to drop into the cavity of the uterus, that then the placenta will become attached to the cervix, or sides of the uterus.

Dr. Burns ascribes placenta prævia to the mode in which the ovum presents as it enters the uterus. For instance, if that side enters first to which the embryo is attached, he supposes it unites itself with the inner layer of decidua to form the placenta, and that, as the ovum increases, the decidua reflexa being pushed before it, the placenta at last comes to be attached over the os uteri.

Velpeau's opinion is, that the future situation of the placenta depends upon the adhesion of the decidual membrane to the uterus being greater at one point than at another; for example, he conceives that if the adhesions are stronger above, the ovum will descend; and, in like manner, laterally, according to the side where the membrane is least adherent.

Professor Moreau(*a*) claims the credit of having first pointed out the predisposing causes of this abnormal affection to depend on a want of consistence of the decidual membrane, or of due adhesion of it to the uterine parietes. He also supposes that the ovum receives an impulse on leaving the Fallopian tube, which, together with accidental circumstances, such as mental emotions, sudden fright, &c., may cause its descent to the cervix, where it becomes fixed, if arrested by the plug of gelatinous mucus which fills the cervico-uterine orifice: or if the latter is open, and the mucous plug not sufficiently firm to arrest its progress, the ovum passes on, and is shortly expelled, along with an accompanying discharge, constituting what he called an "effusion," or "effluxion."

Lastly, M. C. Negrier, of Angers, on the supposition of the ovum being sometimes fecundated by the semen during its

(*a*) Vol. i. p. 330.

passage through the uterns, gives it as his opinion, that in cases of placental presentation the ovum had already reached the cervix before it was fecundated, after which it becomes fixed there(*a*).

On the structure of the human placenta, and the nature of its connexions with the uterus, various opinions are still entertained. The Hunterian doctrine of the placenta consisting of two portions, a maternal and a fœtal, and the belief in the existence of utero-placental vessels, has been denied by Dr. Robert Lee. On the other hand, Dr. Burns, from a careful examination of the original preparations of the Hunters, and likewise from investigations conducted on the parts in their recent state, has arrived at conclusions corroborative of those of Hunter.

Dr. Radford, in 1832, published an essay on the structure of the human placenta, and its connexions with the uterus, in which he endeavours to prove the structure of the placenta to be entirely fœtal and vascular. In describing a preparation, he says: "The placenta, which was everywhere pervaded with injection, proves every part of it to be accessible to the fœtal vessels; and there is no part in it which answers to the portion that is usually described as the maternal or cellular." This observer succeeded in injecting the uterine structure through the umbilical vein with size, the effect of which he describes as follows: "The entire structure of the uterus was permeated by the injection, and some of the sinuses partially filled, and all of them coloured by it." In the same essay he also demonstrated the existence of placento-uterine vessels, which he describes as so minute, that they are not capable of being injected with wax, or of admitting, perhaps, red blood. Through these minute vessels, however, he supposes an interchange of the more subtle parts of the blood do take place between the mother and fœtus.

(*a*) *Recherches et Considerations sur la Constitution et les Functions de Col de l'Utérus*, par C. Negrier, 1846, p. 46.

According to the investigations of Dr. Reid, the fœtal-placental vessels form tufts, each composed of an artery and vein, which are received into sacs, formed by the inner coat of the vascular system of the mother, and hang there like the branchial vessels of certain aquatic animals. These sacs, according to him, are filled with maternal blood through the curling arteries of the uterus (first noticed by the Hunters), and are emptied by the utero-placental veins, which return the blood to the mother, without its ever having left her own system of vessels.

Dr. Reid also observed that some of these tufts of placental vessels were prolonged into certain of the uterine sinuses, and these ramified to the distance of a quarter, half an inch, or even an inch, in their interior; at other times they merely projected into the mouths of the sinuses. At all times they were covered by a prolongation of the inner coat of the venous system of the mother, so that no extravasation of the maternal blood could take place. The Hunters believed that the intervals between the fœtal-placental vessels were filled up by a cellular tissue, into which the maternal blood is poured. Reid says there is no such tissue connecting them.

The uterine vessels are described by Weber as forming a net-work in the interior of the placenta, and he has not noticed the prolongation of the fœtal-placental vessels into some of the uterine sinuses; these constitute the chief points of difference between him and Dr. Reid. The latter further states, that the umbilical artery and vein forming each of the tufts divide and subdivide exactly in the same manner, and at last terminate in each other. Weber supposed that the inosculating artery made several loops and turns at the end of the villi, or tuft, before entering the nearest venous trunk. Some late investigations made by Mr. Dalrymple would appear to bear out Weber's view as to the termination of the arteries by capillaries before entering the venous trunks.

I copy the following analysis of Mr. J. Goodsir's description of the structure of the human placenta from Cormack's Monthly Journal for June, 1845: "According to Mr. Goodsir, the walls of the tuft and villi of the placenta are composed of the following textures. 1st, a fine transparent membrane, continuous with the internal membrane of the vascular system of the mother, described by Dr. J. Reid. 2nd, a layer of cells (the external cells of the villi), described by Mr. Dalrymple. 3rd, a membrane even finer and more transparent than the external, immediately bounding the blood-vessels, and which he names the internal membrane of the villus. 4th, a layer of cells, the internal cells of the villus. 5th, the blood-vessels of the tufts. The two first form the maternal portion, the two last, the fœtal portion of the placenta." He concludes from the anatomical constitution of the villi, "that the function of the external cells of the placental villi is to separate from the blood of the mother the matter destined for the blood of the fœtus; they are, therefore, secreting cells, and are the remains of the secreting mucous membrane of the uterus."—"The function of the internal cells of the placental villi is to absorb through the internal membrane the matter secreted by the agency of the external cells of the villi. The external cells of the placental villi perform, during intra-uterine existence, a function for which is substituted in extra-uterine life the digestive action of the gastro-intestinal mucous membrane. The internal cells of the placental villi perform, during intra-uterine existence, a function, for which is substituted, in extra-uterine life, the action of the absorbing chyle-cells of the intestinal villi."

Having considered the structure of the placenta, and the nature of its connexion with the uterus, we are now prepared to discuss the question,—from what set of vessels does the chief flow of blood issue? This is a most important point to settle, for upon a knowledge of it will depend our power to

decide as to the merits of a mode of treatment highly recommended of late by the eminent professor of midwifery in Edinburgh.

In order that we may arrive at a fair conclusion on this disputed point, it becomes necessary to quote the opinions of some other late writers upon the subject. Dr. Lee says he has observed at least twenty cases of placenta prævia(*a*), where "the first attack of hæmorrhage was so sudden and profuse as to endanger life, and, in several, reduced the patient to a condition which rendered recovery impossible, though the most prompt and energetic treatment was employed. In all these cases the blood could not have escaped from the mother through the medium of the placenta, but from the mouths of the great veins left open in the lining membrane of the uterus, by the detachment of the placenta, in consequence of which a direct communication was established between the cavity of the uterus and the cavities of the heart." He further observes: "The small curling arteries in the placental decidua, which convey the whole of the maternal blood that enters the placenta, could not possibly replenish the organ for a very considerable period, if the maternal blood were entirely to escape in a few seconds from the exposed decidual veins: the fœtus, also, would invariably perish in cases of placental presentation after the first attack of hæmorrhage, if this were the fact, which is known to be quite the reverse."

The open gaping mouths of the uterine sinuses, so well described by Dr. Lee, as the chief source of the hæmorrhage in placenta prævia,—as indeed in every other form of uterine hæmorrhage previous or subsequent to delivery,—are beautifully illustrated by a plate in the late Dr. Ingleby's valuable treatise on this subject, to which we would particularly direct the attention of our readers.

Dr. Ashwell(*b*) remarks: "It is easy enough to shew, to the

(*a*) The London Med. Gaz. 1845, p. 1106. (*b*) Ibid. p. 1196.

satisfaction of the most incredulous, the great openings existing in the lining membrane of the uterus, exactly opposite the attachment of the placenta, and which are covered by interposed decidua. Into many of these the tip of the finger may be inserted, while their course, and extensive communications with the uterine sinuses, full of blood, is evident at a glance. Surely, such an organization affords the clearest proof of the *source* of the hæmorrhage in placenta prævia." Dr. Lee's observations are, in his estimation, "altogether unanswerable."

Dr. Radford(*a*) recognises two sources of the hæmorrhage in placenta prævia: first, from the uterine sinuses; secondly, from the decidual surface of the placenta. According to him: "So long as the placenta is alone separated, and its organization remains perfect, bleeding takes place from one or both of the seats before-mentioned. But after labour has existed some time, the placenta becomes not only further separated, but its structure is disrupted, and its texture broken up, so that another source of bleeding is now created under the last-mentioned circumstances, as the blood now proceeds directly from its own circulatory system."

Professor Simpson, of Edinburgh, asserts, "that the hæmorrhage comes chiefly from the placenta itself;"(*b*) and, on this supposition, recommends the novel practice of the extraction of the placenta before the child. He says: "When it is only partially separated from the uterus, the blood enters freely by the adherent portion of placenta that is detached." This would be admitting a direct communication to exist between the fœtal vessels and those of the mother,—for in what other manner could we account for the *sudden* prostration of the

(*a*) London Medical Gazette for 1832, page 1246. Since then he has, however, changed his opinion with regard to a direct vascular connexion between the mother and the fœtus; being convinced that his conclusions at that time were incorrect. See Lancet for 27th February, 1847.

(*b*) Northern Jour. of Med., Jan. 1846; and London and Edin. Monthly Jour., 1845–6.

latter after a gush of hæmorrhage. Dr. Simpson accounts for it in a different way. He says: "One cause contributing to prevent hæmorrhage after the total separation of the placenta is, the abstraction from the uterine vascular system of the derivative or sugescent power of the maternal circulation in the placental cells, and the consequent tendency of the blood to flow in the more direct and freely communicating channels that exist between the uterine arteries and veins. Besides, the general and direct forward current of the blood along the course of these larger uterine veins diminishes, and, in a measure, destroys the tendency which it might otherwise have, either to flow backwards, or to escape by any existing lateral apertures of the vessels. Among the other remaining means by which hæmorrhage is more or less prevented after the detachment of the placenta, I may mention, first, the occasional presence of tufts of fœtal vessels left in the orifices of the uterine veins, and forming not only immediate mechanical obstacles, but nuclei for the ready coagulation of the blood; second, the formation of coagula in some of the collapsed venous tubes and orifices; and third, the presence for some hours, or even days, after delivery, of the collapsed decidua over the apertures seen in the veins on the interior of the uterus."

I now leave it to the judgment of those who, from practical experience and correct anatomical knowledge, are able to decide whether we are to receive this new theory of Dr. Simpson's, and with it to adopt his new method of treatment, or not. For my own part, until stronger evidence is brought forward in corroboration of his views, I would rather persevere in the old established line of practice in this emergency, than adopt a plan so much opposed to our present state of anatomical knowledge and practical experience.

Mr. Newnham, of Farnham, has published in the Medical Gazette(*a*) the result of his experience in cases of placenta prævia. He met with thirteen cases of placenta prævia since

(*a*) London Med. Gaz. Nov. 1845, p. 1247.

the 1st of January, 1812, and of these, twelve mothers recovered. The fatal result in his thirteenth case, cannot be attributed to the operation of turning, although the woman only survived it two hours, for it appears he had recourse to it solely as a forlorn hope, the patient being exhausted from previous hæmorrhage before he saw her. It is also to be borne in mind that this was a midwife's case, where he was called in too late. The above thirteen cases were all that ever occurred to him : "they are not, therefore, selected cases, or taken from one class of life, but may be considered as a fair sample of country practice." He attributes his success in the foregoing twelve cases, "first, to his invariable rule in every case of doubtful hæmorrhage, to make himself perfectly certain as to the cause of the flow of the blood ; secondly, having ascertained that it was from placental presentation, to lose no time in effecting delivery by turning; to turn at once, if the os uteri were sufficiently dilated or dilatable ; and if not, to adopt every possible means to secure this object, and to turn as soon as it was obtained ; and thirdly, to the possession of an extremely small hand, which enabled him to do all he had to do with less violence to the mother, and, consequently, with less present hæmorrhage, and less subsequent irritation."

The result of Dr. Lever's cases, also published in the Medical Gazette(*a*), affords a much higher average of mortality: for of thirty-four cases he lost seven mothers. Eighteen of these cases are stated to have been only partial ; yet version was performed in thirty cases. In these thirty, seventeen children were saved.

I hope the profession generally will follow the good example shewn by Drs. Newenham and Lever, for it is only by our having the results of a large number of cases that we will be able to come to a conclusion as to the comparative mortality of cases treated by the ordinary mode at the present day, and by the practice of late advocated by Drs. Simpson and Radford.

(*a*) London Med. Gaz., Dec. 1845, p. 1422.

In a paper read by the former before the Medico-Chirurgical Society of Edinburgh, Dec. 4, 1844, on the spontaneous Expulsion and artificial Extraction of the Placenta before the Child, in Placental Presentation, he contrasted the results of the practice generally followed with that of 120 cases collected by him ("some previously recorded, and others collected from private sources), in which the placenta had come away before the infant, either expelled by the natural efforts alone, or in consequence, in several instances, of the reputed bad management of the accoucheur."(*a*) Of these only eight mothers died, affording an average mortality of one in fifteen. Whereas, out of the former, amounting to 339 cases in all, treated by version and the ordinary rules of practice, 115 mothers died, or one out of every three. "The same cases also shew that, though much blood may have been escaping before the placenta comes away, yet as soon as the separation is complete, the hæmorrhage usually ceases, or becomes very trifling. A complete separation of the placenta is thus proved to be far less dangerous than a partial one,—a fact that at first may appear somewhat paradoxical, but which is readily explained by the structure of the fœtal placenta. The hæmorrhage comes chiefly from the placenta itself. When it is only partially separated from the uterus, the blood enters freely by the adherent portions, and escapes as freely from the surface of the portion of placenta that is detached. From a consideration of these facts, Dr. Simpson was led, four years ago, to propose to the Obstetrical Society, whether, in cases of hæmorrhage from placental presentation, we should not sometimes adopt the practice of extracting the placenta, in order to arrest unavoidable hæmorrhage, leaving the fœtus to be expelled by the natural efforts of the uterus, or otherwise." Dr. Simpson stated he had adopted this procedure in one case in autumn, 1844, with perfect success, the placenta having been extracted two hours before the birth of the child. "This method, he thought, would be found particularly

(*a*) London and Edin. Monthly Jour., Feb. 1845.

applicable to those sets of cases in which turning or rupture of the membranes is inexpedient or impracticable; as, in cases where hæmorrhage occurs to an alarming extent, while the os uteri is still small and rigid; in unavoidable hæmorrhage in first labours; in placental presentations, when the patient's strength is already so sunk, from the flooding, as not to allow, without danger, of immediate turning or forcing delivery; in cases where the child is known to be dead, &c. &c."

Dr. Radford(*a*), of Manchester, limits the extraction of the placenta—1st, "Where the danger to the woman is so great from exhaustion, as to render the ordinary plan of delivery by turning the child hazardous. 2nd, Where there exists some obstacle to the extraction of the child, either from distortion in the bones of the pelvis, or tumours connected with it, or in its cavity, but connected with the soft parts. 3rd, Where the child is dead."

Out of the nine following cases of placental presentation that I have witnessed, only one was attended with fatal results, and in that the placenta was extracted. This was a case of unavoidable hæmorrhage at the fourth month, and its history, at least, is not such as to encourage us in a repetition of the practice, at all events, at such an early period of utero-gestation.

Case I.—In December, 1842, I was requested to visit a poor woman, aged 40, residing in New-row, and in the fourth month of her second pregnancy, who was represented by the messenger to be bleeding to death. We found her in bed, where she had been obliged to lie down two hours before, on account of weakness produced by a profuse discharge of blood; labour pains had commenced that morning, and had continued all day, accompanied with hæmorrhage, but not such as to alarm herself or friends until 4, p. m. Her countenance was now ghastly pale and anxious, pulse quick and feeble, indicating the loss of a considerable quantity of blood. On examination, the os uteri was found dilated to the size of a crown-piece, with the pla-

(*a*) London Med. Gaz. 1845, p. 1291.

centa attached centrally over it, hæmorrhage profuse, and increasing with every pain. The placenta was extracted, and an attempt made to hook down the fœtus with a finger, which failed. A slight draining continuing, a plug was then introduced, which checked it; and shortly afterwards ergot of rye was administered, without, however, producing any good result.

On the second day the plug was removed, and with it a portion of placenta which had been left; the os uteri was found, on examination, to be now nearly closed.

On the fourth day she complained of pain in her back, but not of such a character as to attract particular attention. Six days after this, her only complaint being weakness, she was ordered light nourishment, chicken broth, &c. No particular change occurred until the thirteenth day, when she first complained of her throat, and of inability to open her mouth; she could only swallow fluids, and even these with difficulty. An examination being instituted, the os uteri was found perfectly contracted and impervious; she had experienced severe pain in the back all night, with occasional spasms of the facial muscles. On the following day the jaws were completely locked, and the body bent backwards, in a state of opisthotonos: death finally put an end to her sufferings on the sixteenth day.

I think every one must admit, from the symptoms above noted, that this was a case of tetanus; and may we not pronounce it traumatic, when we consider the exciting cause to have been an injury inflicted on the cervix uteri by the forcible extraction of an adherent placenta.

Case II.—The next case was a patient that a neighbouring practitioner requested me to attend for him, saying that he had another engagement at the time, and merely observing, in a cursory manner, as he left me, that I should go quickly, as the woman had lost some blood. On reaching the house a few minutes afterwards, I found her in a most exhausted state from hæmorrhage. The nurse produced a vessel containing a large

quantity of coagula, and said these were only a portion of what had been discharged within the last twelve hours. On examination, I found the os uteri not fully dilated, and the placenta presenting over it. There was no pulse at the wrist, at least that I could feel. Fearing to deliver her in the state she was then in, I plugged the vagina, and ordered some port wine. Dr. Ireland saw her shortly afterwards, and whilst making an examination, requested me to allow him to bring down the foot, which was then within reach, as he was afraid any further loss of blood might prove fatal. This he succeeded in effecting by means of two fingers introduced into the os uteri, and then charged me to be in no hurry in terminating the delivery, but merely to assist the expulsive efforts of the uterus, and in the intervals of the pains, to keep up constant gentle traction upon the limb, so as to make the thigh act the part of a plug. In this way delivery was not completed for three-quarters of an hour, by which time the patient had recruited under the continued administration of wine. The child was, of course, dead. The mother recovered, without any bad results.

I have been thus particular in detailing the management and history of this case, that it may prove as useful a lesson to those beginning the practice of midwifery as it was to me. I am convinced that, had I not attended to the judicious and practical directions I had received, but, on the contrary, had hurried the delivery, that in place of saving the woman's life, she must have, in all probability, perished from the effects of the sudden shock, in her then prostrate condition. As it was, we had the greatest difficulty in supporting her fast-ebbing strength, in the interval afforded us by the course pursued, which would undoubtedly have been speedily extinguished, had we followed a contrary mode of delivery. Now this is one of the cases where Drs. Simpson and Radford recommend the extraction of the placenta—"the danger to the woman being so great from exhaustion, as to render the ordinary plan of delivery, by turning the child, hazardous."

Case III.—Mrs. W., of Corn-market, ninth pregnancy, was visited on the 12th of January, 1845, by Messrs. Evans and M'Murray, who, finding her in a dangerous state from loss of blood, came for me. On examination, I found the vagina filled with clots, the os uteri was well dilated, and the placenta presenting. With little difficulty I succeeded in passing my hand between the placenta and uterus posteriorly, and in seizing a foot, which having brought down externally, the hæmorrhage completely ceased. The delivery was shortly afterwards completed. This child was born alive. The mother recovered rapidly.

Case IV.—Mrs. R., New-street, states that about a month since she was attacked with a shedding, without any apparent cause. This continued increasing, at intervals of ten days, until Tuesday, the 16th of June, when a quantity of fluid escaped, preceded for the first time by uterine pains. From this date until the commencement of her labour, a period of a week, there was a gush of blood during each pain, which amounted to about eight or ten in the course of the twenty-four hours. I saw her on Monday, the 22nd, at half-past nine P. M., and, on examination, found the os uteri dilated to the size of a shilling, the cervix still elongated, and the placenta presenting. The vagina was at once plugged with a sponge, which effectually stopped the hæmorrhage. About one, A. M., June 23rd, the sponge was removed, and the os uteri found to be dilated only to the size of half-a-crown. During each pain a gush of blood occurred; the sponge was therefore reintroduced, which stopped the hæmorrhage completely. At four, A. M., the os uteri was sufficiently dilated to admit of the introduction of the hand, by means of which a foot was brought down, and delivery effected of a small male child, alive. This woman recovered in the usual time, without the supervention of a single bad symptom.

Case V.—I was sent for by the nurse of the Western Lying-in Hospital, at eleven, P. M., Nov. 6th, 1845, to see Mrs. L., of

Beresford-street, aged 30. This was her sixth pregnancy. Her previous labours had been all natural and rapid. By her own account the pains first commenced at three, P. M. At six o'clock, whilst sitting at tea, she felt a copious discharge coming away, which she supposed to be the waters, but on inspection, in place of water, it proved to be blood; the hæmorrhage came on with each pain. By the account of her attendants she had lost several pints of blood before I visited her at half-past eleven. She is stated to have fainted twice before they lifted her into bed. Skin cold and clammy; face ghastly pale; complains of faintness and thirst. On examination, the vagina was found filled with clots, the os uteri high up, undilated, and rigid; hæmorrhage to an alarming extent occurring with every pain. A sponge, soaked in vinegar and water, was immediately introduced into the vagina, and passed up to the os uteri, and small quantities of wine were occasionally administered. Under this treatment she soon began to rally, and the pains to recur more regularly, without any appearance of hæmorrhage. 7th, at one, A. M., a clot was forced out past the sponge, and half an hour afterwards a powerful pain expelled the plug, along with a large coagulum. The soft parts being now well dilated, I passed my hand up to the os uteri, and found the placenta completely covering its orifice, so it was with some difficulty that I was enabled to separate it posteriorly, and to carry my hand into the cavity of the uterus; a large quantity of liquor amnii at this time escaped. After passing the head, the first member that presented itself was a hand; avoiding it, I got hold of a foot, and, after about fifteen minutes, succeeded in delivering her of a full-grown male child, unfortunately past resuscitation. The placenta being removed, and the binder carefully applied, she was left under the charge of the nurse for the night. On visiting her again at two, P. M., I found her in a very exhausted state, after passing a sleepless night, the wet clothes about her never having been changed since my last visit. She was ordered an opiate at night. On the fol-

lowing day (the 8th) she complained of pain over the left side of the fundus of the uterus, which subsided under the usual treatment. On the 21st she was attacked with phlegmasia dolens, for which complaint she was removed to hospital, but ultimately recovered.

The third and fourth cases which I have related illustrate the great advantage to be derived from the use of the *tampon* when the soft parts are rigid and undilated, as by means of it you save the profuse loss of blood to the patient, which must otherwise take place before the os uteri is sufficiently dilated to admit of the introduction of the hand for the purpose of turning. I am aware that many object to the use of the plug in cases of unavoidable hæmorrhage at the full time, from the dread of internal hæmorrhage going on without the attendant being aware of it. Now, although I recommend its use in cases of rigidity, I would by no means have it used indiscriminately, and for the purpose of allowing the medical man to leave the house; on the contrary, I would have him never leave the bedside of his patient until he was perfectly certain that the hæmorrhage was arrested; this favourable result will soon be indicated by the pulse of his patient, and by her fast returning strength. I have been really astonished at the rapidity with which they recruit after its introduction; and not only that, but I have remarked they acquire a degree of confidence in their present state of safety, which materially assists the uterine contractions. For my own part, I cannot see any risk of internal hæmorrhage from the use of the plug in complete placental presentation, until full dilatation has taken place, which is all we recommend it for; of course, the attendant should be on the watch, and if he saw any appearance of sinking about his patient, he should immediately withdraw the plug, and ascertain distinctly the state of things. With these and other precautions, which must strike every well-educated accoucheur, I have no hesitation in adding my testimony to those who advocate the use of the plug in certain cases, and at

a particular stage of placental presentation. The plug, when properly introduced, acts the part of a compress against the bleeding mouths of the vessels(*a*). I prefer a soft sponge for the purpose, sufficiently large to fill the vagina. When introduced, after being steeped in cold vinegar and water, let the superior extremity, which should be the narrowest, be fairly brought into contact with the bleeding mouths of the cervico-uterine vessels.

Case VI.—Mrs. Callaghan, aged 31, was admitted into the Western Lying-in Hospital, in labour of her second child, on the 4th of March, 1846; had enjoyed good health until the first of the month, when hæmorrhage commenced, and continued at intervals until this morning, when her friends applied to the hospital for aid. On admission the os uteri was found well dilated, with a lip of the placenta and an arm of the child presenting. It being decided to deliver immediately by turning, Mr. Speedy accomplished the delivery with little difficulty or delay. We were not successful in restoring the child to life, although we could distinctly see for a time the impulse of the heart's action against its chest. The mother recovered without a bad symptom.

Case VII. was one of complete placental presentation. The woman was admitted into the Western Lying-in Hospital on the 12th of April, 1846, in a very exhausted state from loss of blood; the membranes were ruptured, which not effectually checking the hæmorrhage, Dr. Churchill, on account of her exhausted state, &c., eventually delivered her by the crotchet on the evening of the same day. This woman had also a good recovery.

Cases VIII. and IX.—The two remaining cases were pa-

(*a*) Taking this view, M. Negrier of Angers insists upon the introduction of the plug *obturant* as the best, or even the only means to be relied on, for arresting hæmorrhage after delivery, when the placenta has been attached to the cervix uteri, especially if assisted by external compression over the body of the uterus.—*Recherches par Negrier*, p. 151.

tients that I saw delivered safely in the Dublin Lying-in Hospital, when a pupil, some years ago. The first was a case of complete placental presentation, in which instance the foot of the child was brought down. The second was an example of partial placental presentation, where the only treatment adopted was rest and the application of cold. The membranes had been ruptured before her admission.

Dr. Churchill, in his Midwifery, states the extreme risk attendant upon all operations requiring the introduction of the hand into the uterine cavity, which is, in his opinion, followed by more or less untoward results in almost every instance. Case v. affords a good example of the justness of this observation, although I must say that I attribute the bad consequence, in this instance, to have been more owing to the neglect of the attendants, in not removing her wet clothes for twelve hours after the operation, than to any injury inflicted on the soft parts during the manœuvre of turning. Besides the risk here alluded to, Dr. Simpson's plan is liable to still greater objections; the forcible extraction of an adherent placenta through an undilated os uteri being, in my mind, a much more dangerous operation than even that of turning, leaving out of view the certain destruction of the infant, which must inevitably result from the former plan when put into execution. How Dr. Simpson can include cases of the spontaneous separation and expulsion of the placenta, in his Table of Mortality, with those cases where artificial separation was resorted to, is to me inexplicable; the first being an entirely natural process, the latter an operation requiring considerable manipulation, and, no matter how delicately performed, one which must be attended with more or less violence to the cervix uteri.

That there may be cases where, from great loss of blood previously, it might be useful to extract the placenta (provided it was separated sufficiently) in order to hasten the labour, and to allow the presenting part of the child to come into imme-

diate contact with the bleeding mouths of the uterine vessels, I would not positively deny; although I never saw such a case, where turning was not practicable with safety to the mother, and where the immediate extraction of the placenta afforded the best, if not the only chance of saving the mother.

Let us now take Dr. Rigby's forty-three cases of placental presentation, quoted by Dr. Simpson in his table of mortality, and inquire into the particulars of those attended with a fatal result.

Case VII. was one of placenta prævia complicated with distorted pelvis, and, in Dr. Rigby's own words, she "had lost an immoderate quantity of blood, was greatly sunk, and appeared to be almost dying." Is it therefore any wonder that this woman did die, when we find that before opening the head, which could not otherwise be drawn through the pelvis, such extractive force was used as to separate several of the cervical vertebræ? (See history of case, page 107, Rigby on Uterine Hæmorrhage).

In Case X. the woman had been flooding two hours before Dr. Rigby saw her: "She had in that time lost a very great quantity of blood, and was so much sunk by it, that she died soon after I came into the room." So it appears nothing was done in this instance. He saw her too late. On examination, "the placenta was found situated upon the os uteri, and a partial separation of it, not bigger than a crown-piece, was the cause of this fatal hæmorrhage."

In Case XIV. the patient had lost an "astonishing quantity of blood, and had the most threatening appearance:" "her pulse was scarcely perceptible; her countenance was pale; her lips livid, &c.: the uterus was very little open." Turning was performed under these unfavourable circumstances: is it any wonder "she died about six hours after?"

Case XV. was bled by the surgeon who visited her first; and, when Rigby saw her, was so reduced by that, and from subsequent flooding, that "she seemed to be dying." "The

uterus was shut, though loose and relaxed;" yet turning was had recourse to as a forlorn hope. "She died in half an hour after delivery."

In Case xx. the woman died (under the care of a midwife) an hour before Dr. Rigby saw her.

His forty-seventh is the next case of placenta prævia, which proved fatal to the mother. This poor woman was under the care of *a midwife.* She had lost an "excessive quantity" of blood before he saw her, "and she was faint to an extreme." Version was effected without difficulty; but the placenta adhered so closely to the cervix uteri, that it took him an hour and a half to remove it. This woman died about twelve hours after.

Case lviii. proved fatal several days after delivery; the woman being attacked with fever on the third or fourth day, and died a few days afterwards. A midwife had been in attendance on this case for several days before Dr. Rigby saw her, and when he arrived he "found her very much reduced by loss of blood."

Case lxxxi. "The patient was a poor woman, and had been a long while under the care of a midwife before the surgeon was sent for." "An excessive quantity of blood had been lost, and she was reduced to the last extremity." "Though the turning was effected without the least difficulty, she did not survive it more than half an hour."

Case lxxxii. "This poor woman was about eight months gone with child; was forty-two years of age; of a very weak constitution; and had been ill of a malignant fever more than a week." He "found her very ill, with a small but very quick pulse. She appeared drowsy, and took very little notice of what passed in the room; and this, though she had been faint from the loss of blood, appeared to be principally owing to the stupor which was characteristic of her fever." She "fell a victim to the disease before the end of the week." Turning and delivery were effected with ease. Is it likely any other mode of treatment would have proved more successful?

Case LXXXIX. "This was a very weak, delicate woman." "I was not called to visit her," he writes, "until she had lost a great quantity of blood." It appeared that she was attacked with fever on the third day after delivery, "which she did not long survive."

Case XCVIII. is well worth the perusal of the reader; after which, I am sure, no candid person will attribute the melancholy result to the operation of turning, but to the miserable condition in which Dr. Rigby found her: he says, "she appeared to be almost expiring."

The above cases do not here require further comment; and I invite the reader who takes an interest in the subject to peruse their histories in full, and judge for himself whether I have not given a fair summary of the fatal cases. I find, furthermore, that Dr. Simpson gives only forty-two cases in his table as the result of Dr. Rigby's practice, out of which number, twelve were fatal. Now I make out forty-three in all, out of which number, after the most careful examination, I can only find eleven to have proved fatal, as the following summary abstracted from the total number of cases of hæmorrhage with their results (106), published by Rigby, will shew:

Of his forty-three cases of placenta prævia, thirty-two were successful, and eleven unsuccessful. The hæmorrhage in the other cases related by Dr. Rigby depended on accidental circumstances, such as the separation of the placenta from its normal situation: none of them proved fatal.

Dr. Collins reports eleven cases of unavoidable hæmorrhage, as having occurred during his Mastership of the Dublin Lying-in Hospital; of these, two mothers died after the child had been turned and delivered, "one from laceration of the uterus, and the other from the effects of the hæmorrhage both before and after the birth of the child." In both it was necessary to interfere under *unfavourable* circumstances. It is worthy of remark, that out of the eleven cases Dr. Collins saved six

children, and of the five still-born children two were putrid, and had evidently been dead for a long time(*a*). The same author observes: "I know of no circumstance *so much to be dreaded* as the forcible introduction of the hand where the parts are in a rigid or unyielding state." Now, with these facts before us, and on the authority of a physician of such extensive experience, a prudent practitioner of the present day should hesitate before he attempts to turn under such circumstances. What, then, are we to do? I maintain that it is equally dangerous, under like circumstances, to extract the placenta, as recommended by Drs. Simpson and Radford. Dr. Samuel Cusack, after describing a case of complete placenta presentation, where turning was afterwards resorted to, observes: "The most remarkable feature in this case was the great advantage found to arise by plugging the vagina; the os uteri seeming in the first instance too rigid to allow of turning being performed with safety to the patient." Now this is the treatment I would pursue in all cases of rigidity of the os uteri, due attention being paid to the condition of the patient, and to the precautionary measures already suggested, when speaking of the use of the plug in a former part of this paper. It is a question more difficult of decision, whether the plug is ever admissible after delivery, when the hæmorrhage continues. On this point I would be sorry to hazard an opinion, not having ever had occasion to try it; but do not see why it might not be used as recommended by M. Negrier, the binder being first firmly applied, and by its means the uterus prevented from enlarging. Dr. Campbell of Edinburgh possesses a record of twenty-two cases of placental presentation, where version was the treatment employed, "and with success to the parent in all of them, with one exception, in which more than six pounds of blood were lost before the patient was visited."(*b*)

In conclusion, I would suggest the following course of prac-

(*a*) Collins' Practical Observations, pp. 93, 100.

(*b*) The Northern Journal of Medicine for May, 1846, p. 258.

tice to be adopted in all cases of placental presentation, where the practitioner has been in attendance from the commencement of the hæmorrhage :

1st. In cases of partial placental presentation, he should avail himself of the earliest opportunity to rupture the membranes, and evacuate the uterus of all its fluid contents.

2ndly. In the same class of cases, after the escape of the liquor amnii, should vigorous uterine action not ensue, to encourage this desirable end by means of friction over the fundus uteri, the application of a binder, the administration of ergot of rye, or the use of galvanism, as recommended by Dr. Radford(*a*).

3rdly. In complete placental presentation, when the os uteri is rigid and undilated, never to attempt to extract the placenta through it in that state, but to plug the vagina carefully by means of a soft sponge, previously steeped in cold vinegar and water.

4thly. As soon as the os uteri has been sufficiently dilated to admit of the introduction of the hand, to seize a foot and deliver cautiously.

5thly. Should there be no doubt of the child's being dead, and the head presenting, it may be delivered by the crotchet, after lessening its head.

6thly. As I attribute the entire cessation of the hæmorrhage which occurred in Dr. Simpson's cases, and those of others, after the extraction of the placenta, to the fact of the uterus being thereby entirely emptied of its fluid contents, and allowing the presenting part of the child to be pressed against the bleeding orifices of the uterine vessels, that in certain cases the placenta might be pierced with a gum-elastic or silver catheter, and the liquor amnii thus allowed to escape. This operation is applicable to cases where the feet present, or where craniotomy is decided upon (in head presentations), either on account of distorted pelvis, or from the fact of the child being dead.

(*a*) Provincial Med. Jour., Dec., 1845 ; see also p. 300 of this Journal.

Art. XI.—*Observations on the recent Epidemic Influenza among Children.* By Fleetwood Churchill, M.D., M.R.I.A., Lecturer on Midwifery and Diseases of Women and Children, in the Richmond Hospital School of Medicine.

TO THE EDITOR OF THE DUBLIN MEDICAL JOURNAL.

My dear Sir,—I take the earliest opportunity of complying with your request, that I would give you a short sketch of the prevailing influenza among children, as it has come under my observation; premising two remarks,—first, that all the cases I have seen have been in private practice, and, consequently, among those in more or less comfortable circumstances, so that they cannot be taken as evidence of the character of the disease amongst the poor; and secondly, that the large number is to be accounted for by this being the disease most frequently met with lately, but especially by the fact of the greater part, or the whole, of a family of children being simultaneously or successively affected. Thus I saw this morning a family of six children, the whole of whom have been confined to bed with the influenza within the last week.

The number of cases, then, that I have seen within the last two months, and from which my remarks will be drawn, exceeds sixty; and they embrace children of all ages, from two months old to twelve or fourteen years. I may add, that, in addition to the children, in many cases, the parents or servants were similarly affected.

I think that, without exception, the younger the child the more severe the attack.

The mode of invasion varied a good deal. In some instances the whole family seemed to submit to the epidemic influence at once, and all were laid up; in others, one or two would present the epidemic character well marked, and the others complain merely of a slight cough, accompanied in a

day or two by feverish symptoms; whilst occasionally each child took sick successively, allowing the one first attacked to recover previously.

The characteristic features of the complaint, as in previous epidemics of influenza, have been affections of the chest, invariably accompanied by smart fever. Coughs and colds, without fever, are common enough, but I exclude them, as not true cases of influenza.

The fever sometimes precedes the cough, but more frequently comes on about the second, third, or fourth day. The child is heavy, dull, cross, and cold, creeping to the fire, and unwilling to exert itself, or to share in its usual amusements. The skin becomes hot, florid, and the pulse very quick, ranging from 120 to 160. There is, perhaps, rather less thirst than one would expect from the degree of fever, and the secretion from the kidneys is scanty, and sometimes high-coloured. The tongue is always foul, and loaded with white fur; sometimes, though but rarely, dry; the appetite is lost; and occasionally I have seen vomiting or diarrhœa, but generally both stomach and bowels are steady. In almost all cases the child has been restless and uneasy at night, sleeping little, and, in a few instances, slightly delirious.

As regards the local affection, I have observed three varieties, often quite distinct, but occasionally two occurring in the same child.

1. In the milder form of the disease, the primary bronchial tubes were the portion of the respiratory system affected, and this was most common among the elder children. The attack began by a frequent cough and a degree of hoarseness, indicating that the larynx and trachæa were somewhat affected. The hoarseness often subsided, but the cough continued very troublesome, with free expectoration after the first day or two. In two cases of young children (i. e. under four years of age) the larynx was more seriously affected, and the disease began

by an attack of well-marked croup, which subsided in one case in ten or twelve hours, and in the other in two days, leaving behind it the form of influenza I am describing.

The cough gives a good deal of pain, and elder children describe it as scraping the chest. After a day or two the fever becomes marked and the cough not less troublesome, and for some days the child suffers great distress, until the fever subsides, the cough is less frequent, and the expectoration more abundant.

If the lungs be examined with the stethoscope, they will be found generally free from abnormal sounds, and the respiration vesicular and natural; but the respiration through the large bronchial tubes gives a rough and slightly sonorous sound. Percussion yields a clear and perfectly natural sound.

2. The second form of the disease affected children of all ages, and consisted of more or less intense bronchitis of one or both lungs, with great congestion of those organs. In these cases respiration was much more rapid, and performed with some difficulty, a wheezing being audible at some distance. The imperfect aeration of the blood shewed itself in the dusky red colour of the cheeks, which, in some severe cases, were nearly livid. The cough was incessant, the mucus abundant; but as little children do not expectorate, this rather added to the distress. The fever set in nearly as soon as the bronchitis, and, in some cases, ran very high. In some instances the attack was so severe that suffocation was imminent; but these, with some difficulty and delay, recovered.

When the chest was examined, its movements indicated considerable difficulty of respiration, and the respiratory murmur was lost in a variety of bronchitic rales, mucous, sibilous, and sonorous, varying according to the extent and intensity of the attack. Mixed with these is frequently heard a crepitus,—not the small, distinct crepitus of pneumonia, but larger, and more moist. Percussion yielded a pretty clear sound generally, with

a diminution of tone occasionally in different parts; mainly, I think, in those where the crepitus occurred.

In the progress towards convalescence the crepitus first disappeared; then the movements of the chest became less laboured, and the respirations less frequent; the distress diminished, and the fever subsided gradually. The bronchitic rales continued in a minor degree for a considerable time; and, what was very remarkable, in a great number of cases, as the general bronchitis diminished, I found the primary tubes, and even the larynx, became affected.

3. The third form which I observed the affection of the chest to assume was either simple pneumonia, or mixed with a moderate amount of bronchitis, and, I believe, this form occurred only in young children; I do not remember any case of it in children above five years old. Its commencement, in most cases, was very obscure. The child laboured under high fever, with very rapid breathing, but very little cough. It looked very like a case of remittent fever, and in one or two cases I believed at the first moment it was so, and examined the chest as a matter of duty, to make sure, rather than with any expectation of detecting serious disease. In these cases double pneumonia existed. The respiration in all was, as I have said, extremely rapid, with great action of the alæ nasi, but without the laboured movements of the chest which occurred in the last variety; the face was flushed, with the centre of the cheek of a florid red colour; the pulse very frequent; the thirst considerable, with great restlessness. The usual crepitous rale of pneumonia, clear, small, and distinct, was present, mixed, in a few cases, with mucous or sibilous rales. The part of the chest affected was dull on percussion. Under the treatment adopted the signs of pneumonia gradually disappeared, and, in proportion, the fever subsided, the cough generally increasing for a time, the chest became clear, and the little patient slowly recovered.

Of course, this form of disease involved the greater danger; and of some of the patients I had but slender hopes, as they were children of weak constitution.

As to the treatment, it has been simple and successful. On the accession of fever in all the varieties of local affection, I have found it most advantageous to give an emetic of ipecacuanha in the two first, and of tartar emetic in the last, and to prolong the nausea for an hour or two. In the second and third varieties I have found leeches necessary when the attack was severe, the respiration hurried and difficult, the pulse quick and strong, and the child able to bear them.

In most cases, after these preliminaries, I have ordered a mixture of ipecacuanha wine, paregoric elixir, and almond milk, to be given at short intervals; but when pneumonia exists, the tartar emetic mixture is better, and if it should produce great depression, this may be corrected by ammonia. A small quantity of ammonia, in the former mixture, was advised by Dr. Stokes in some of the cases, and with immediate benefit; it seems to relieve the congested state of the bronchial mucous membrane as much as any thing I have tried; or, if it do not answer, from two to five drops of spirits of turpentine, in mucilage and water, every three or four hours, may be given; in several cases it was very beneficial. If these mixtures disagree with the stomach, or after they have produced their effect, or at the same time that they are exhibited, small doses of calomel, ipecacuanha, and James's Powder, may be given with advantage.

As to external applications, I have found it necessary, in some cases, to have recourse to blisters, but not very frequently, partly on account of the annoyance they are to young children, but principally because I found a very good substitute in poultices, which I think worthy of a more extensive use than they obtain. They are best made of linseed meal, and should be applied directly to the surface, warm, and very moist, changing them every two hours, or oftener. If irritation be

desired, a dessert-spoonful of the flower of mustard may be mixed with the meal.

Warm baths are exceedingly useful, and may be used every night, provided the child do not cry much; if it do, it will be better to bathe or foment the feet.

I have thus, very briefly, complied with your wish. The sketch I have given is slight, and necessarily incomplete, but it may elicit further communications of greater value in themselves, or which, when combined, may be more complete, and my object will thus be attained more effectually. Let me add, in conclusion, that as yet none of my cases have proved fatal, though some were very serious and threatening; so that we must conclude that, among children, although the epidemic is very general and severe, yet that the danger is not very great when properly attended to.

Faithfully your's,

Fleetwood Churchill.

February, 1847.

Art. XII.—*Medical Problems.* By William Griffin, M. D., Physician to the County of Limerick Infirmary.

(*Continued from vol.* xi. *p.* 401, *of former Series.*)

When miscarriage or premature labour takes place at fixed periods, from the influence of acquired habit, may not the periodical movements be prevented by such remedies as prevent the recurrence of an epileptic fit or a paroxysm of ague?

I was called on some years since to attend Mrs. C., a lady who was ill with the usual symptoms of miscarriage at the third month. She informed me, that she had had a miscarriage at the end of the third month of her first pregnancy. She reached nearly to her full time on the second occasion, fell into puerperal convulsions in her labour, and was delivered of a dead child. In her next pregnancy she had a miscarriage at three months; in her fourth at three months; and now in her fifth she

was again threatened exactly at the same period. She informed me that everything had been done to prevent it. She had been bled repeatedly, kept for weeks upon low diet, and was confined during the time entirely to the horizontal position. She lived, in fact, between the bed and the sofa. In this new attack some friends recommended her to send for me, with the hope of having some plan of treatment devised by which she might be enabled to go on to her full time. The amount of the hæmorrhage was, however, so considerable, and the uterine pains so general and regular, I told her it was impossible to prevent the miscarriage, but if I was informed of her condition on any future occasion, when six weeks or two months should elapse, I might, perhaps, succeed. Miscarriage, I believe, took place on that night or on the next morning.

In three or four months afterwards I received an intimation from this lady that she was two months pregnant. On considering the probable causes of the previous miscarriages, I could not detect any very obvious one. Her health was excellent, her habits regular, her diet moderate. The extreme regularity with which the miscarriage always occurred at the end of the twelfth week rather confirmed the only conjecture I could form, that it depended wholly on the influence of an acquired habit; and the question necessarily arose, how was this acquired habit to be interrupted or controlled? All the ordinary measures had already been adopted, and the poor lady had been subjected for weeks to the most irksome and tantalizing restrictions, without the slightest advantage. In this difficulty it occurred to me, that as periodical attacks of epilepsy may often be prevented by a long course of any of the metallic tonics, the periodical movements connected with the action of the uterus might be also under their control. I therefore directed my patient to take two and a half grains of oxide of zinc, with two grains of extract of hops, three times a day, and after each pill, two table-spoonfuls of a mixture of valerian, aromatic spirits of ammonia, and infusion of snake root. She was also

ordered a box of pills, containing a grain of opium in each, one of which she was to take when pain came on, and to repeat the dose every hour until relief was obtained. As she was of a nervous habit, I thought, if my view of the case was a correct one, that both bloodletting and confinement to the sofa would rather tend to increase than lessen the danger, by weakening the general tone of the system, and rendering her more susceptible of slight impressions. I therefore advised her, instead of lying all day upon the sofa, to keep out in the open air on fine days as much as possible, without, however, fatiguing herself, and to live in the manner she usually found to agree best with her. Under this plan of treatment, she passed the twelfth week without the slightest threatening, to her very great joy and the gratification of her friends. Happening, however, in about a fortnight afterwards, to visit a sister who was very ill, she was so shocked at her appearance that she was immediately seized with the usual symptoms premonitory of miscarriage. She had a discoloured leucorrhœal discharge, which, in a few hours, was followed by uterine pains, being exactly the symptoms which had ushered in all her former attacks. She took the opium pills as I had directed her, and before morning the pains and discharge had all subsided, and in a day or two she was as well as she had been before. She then resumed the zinc and valerian for three or four weeks, after which period I did not consider it necessary to continue them. She went on to her full time without the slightest uneasiness, and was finally delivered of a fine child, which is now well and thriving.

Very soon after this lady had applied to me, and when I had just obtained strong presumptive evidence of the success of the treatment adopted, Mrs. H. consulted me with a view of obtaining advice as to the best means of preventing premature labour, which, she feared, was about to come on. It had already occurred to her four times successively; the infant dying in the middle of the sixth month, and her delivery of a dead child taking place at the end of it. She had now com-

pleted the fourth month of her pregnancy. On making some inquiries to ascertain whether she had had at any time a syphilitic affection, I could only glean, that she had suffered with soreness in the vagina for three or four months after her marriage, for which mercurials had been prescribed. This was obviously a very different case from the one already related. In the latter, hæmorrhage and pain came on first, and the child died as a consequence. In the former, the child died in the first instance, and premature labour followed. In Mrs. C.'s case the mere influence of habit, the tendency in the constitution to be influenced periodically, brought on labour. In Mrs. H.'s case the infant died through some unknown cause, and labour came on because of its death. There did not appear, therefore, to be any analogy which could suggest a treatment precisely similar. Taking into consideration the probability of the child's death being occasioned by some syphilitic taint in the habit, I therefore decided on giving calomel and opium in small doses, so as to affect the gums slightly; and subsequently with a view of preventing the accession of labour at the end of the sixth month, from the influence of habit, to adopt the same plan which had been pursued so successfully in the case of Mrs. C. After a fortnight or three weeks the gums became sore, upon which the calomel was suspended, and pills of oxide of zinc, with the valerian mixture prescribed for Mrs. C., were substituted. Under this treatment, Mrs. H. passed the usual period at which labour came on, and continued in good health to the 7th of July, when she was attacked with griping pains and slight flooding. These symptoms subsided by keeping perfectly at rest, and taking a few anodyne pills. On the 17th of the same month, when she had reached within four weeks of her full time, she was seized with threatenings of labour, and on the 19th was delivered of a living child, which died after some hours. This lady resided in the country, at a considerable distance from me, and could not receive that im-

mediate attention and advice, which, if she had been in town, would probably have enabled her to go to her full time.

About the same time these cases were under my care, I was consulted by Mrs. A., who had also been seized with premature labour, in consequence of the infant dying in the seventh month, for three successive years. In her last labour she was seized with violent puerperal convulsions, during which she was delivered of an infant, which had evidently been dead for many days.

I had not had the medical management in the earlier labours, and was merely called in a little before the lady's confinement; in the last I had, therefore, no opportunity of adopting any preventive treatment. When she was again pregnant, however, and approached the seventh month, I adopted the same treatment as I had done in the former cases, partly to counteract, if possible, any tendency to labour arising from acquired habit, and partly that I thought it not impossible the same influence which was capable of controlling a periodical movement in the system comprehending months, might also control causes tending to the death of the child. The lady took the oxide of zinc pills and valerian mixture, three times a day, for some weeks before the period when labour might be expected; and she had opium pills by her, one of which she was directed to take whenever she was seized with uterine pains. These last she had no occasion to take, having gone on remarkably well to her full time, when she fell into natural labour, and was delivered of a living child: it expired, however, almost immediately after. It was obvious here, that the treatment had actually accomplished both the objects I had in view; it had broken up the morbid habit, and it had so interfered with the poisonous influence which had heretofore so invariably, in the seventh month, caused the death of the child, that the latter was born alive. Its death so soon after birth, without any obvious cause, suggested the possibility of some

syphilitic taints in the parents, which led to very particular inquiries. The father, it appeared, had not had a syphilitic affection for ten years before his marriage, and never had one since. Acting, however, on the possibility that, even after that long period, some deleterious influence might have been communicated to the mother, and thus evinced itself in the feeble vitality of the offspring, I placed the lady, as soon as she was out of her confinement, under a mild course of calomel (one grain every night, until her gums became tender), and again, when she reached the dangerous period, resorted to the zinc and valerian. I had now the happiness of finding all my hopes realized; she went to her full time, and had a fine living infant, which has since been going on well.

In the first of the cases I have given, in which abortion occurred apparently from the acquired habit, the treatment was quite successful. The disposition to premature action in the womb was controlled exactly as the movements to a fit of epilepsy or of ague might have been arrested by some similar means. Quinine, carbonate of iron, or nitrate of silver, might have accomplished the object probably as well as the oxide of zinc and valerian. The latter were preferred chiefly because I believed they would be less likely to injure the fœtus, but also because I had considerable confidence in the influence which both, and especially which large doses of valerian, possess over the nervous movements. In the second case, the lady, who had fallen into labour on four successive occasions at the sixth month, in consequence of the death of the child, carried her child to the eighth month, and it was born alive. This instance, however, can hardly be adduced as evidence of the influence of the zinc and valerian, as it seems probable the death of the child, and consequent premature labour, were owing to some syphilitic taint, which was removed by the mercurial treatment. In the third case,—that of Mrs. A. Z.,—the inference as to the truth of the principle assumed may be considered more satisfactory, as she reached her full time, and

had even a living child before the mercurial treatment was adopted.

These cases are so few in number that I offer them to the profession as evidence of the novel application of a principle long recognised in the treatment of epilepsy, ague, and other periodical diseases, with some diffidence. The legitimate manner, however, in which the analogy was inferred, and the remarkable success attending the remedial measures it suggested, were too striking not to make a deep impression on my own mind.

The extreme difficulty, too, which practitioners so often feel in the prevention of abortion and premature labour, as well as the deep interest which married people naturally attach to successful treatment in such cases, invest suggestions supported by even a very limited experience with some importance. The valerianate of zinc, which was not in use at the time these cases were under treatment, would have been a far more desirable preparation, and probably quite as effective. Where it is necessary to continue medicines of this class for a long period, it is a great object to be in possession of such an elegant substitute for so disagreeable a mixture as the valerian.

ART. XIII.—*Some Particulars respecting Swift and Stella, with Engravings of their Crania; together with some Notice of St. Patrick's Hospital.* By W. R. WILDE, M.R.I.A., with Communications from Dr. MACKENZIE and Mr. HAMILTON.

WHEN a great or a rich man dies, he is interred with pomp; case after case, of oak and lead, are provided to resist the ravages of decay,—their lining the softest swan's down, and their cover the purple pall. His elegy is written by his friends and admirers,—if not what he was, at least what he should have been. A mausoleum of the most durable materials is provided. The sculptured marble, or the graphic tablet, while it tells his virtues, points out his last resting-place; and if

genius, honour, or renown, have marked his course while living, the talent of subsequent ages is devoted to the task of his biography. Thus immortality has been gained by the great and good of all ages.

Not so the poor or mean man's death. His last sigh is breathed in an hospital, or some obscure cellar or garret; the frail shell that holds his corpse is procured at the expense of his country; he is followed to the grave by a few mourning friends, and laid without ostentation in the silent tomb; earth mingles with earth, and dust with its kindred dust; the clods rattle on his coffin, and the mound of greensward which covers it marks for a few years to come the only estate he was ever possessed of. His name is forgotten in a day. In process of time, when it is considered that he cumbereth the ground, the frail particles of humanity,—all that now remains of what was once "the human form divine,"—are again exposed to view; but, generally speaking, they are religiously restored by the sexton to their former occupancy. And yet, with all this, though he lives in misery, and dies in want, the beggar enjoys a rest which, in the present time at least, is not vouchsafed to the rich or distinguished, whose monument may be displaced, or whose tablet may be rudely hurled from its resting-place, at the dictate of a commission; and, if the person has been remarkable in life for great mental capacity, it is more than probable that, before many years elapse, some prying phrenologist will have ransacked his tomb, abstracted his cranium, and exhibited it at all the *soirèes* in the neighbourhood during the next six months. This Vandal desecration of monuments is even now proceeding in this country. The skull of Pope is, we believe, at this moment, hawked about by an itinerant phrenologist; and to the indignity to which we have referred have the mortal remains of Swift and Stella been submitted nearly a century after their interment. To this portion of our subject we shall revert presently.

The accompanying letter, which we received from our esteemed friend, Dr. Mackenzie, of Glasgow, in autumn last, induced us to make some inquiries into the matter, the result of which will be found in the following pages. True it is, that some of the topics included in this somewhat discursive essay are not strictly medical; but while we do not acknowledge the narrow limits which are usually assigned to what is called medicine, or the medical sciences, we feel, in common with most of our friends, that any and every circumstance, no matter how minute or trivial, connected even remotely with that illustrious patriot, most accomplished scholar, and dazzling wit,—whose works, the purest specimens of our language, shall ever remain to charm the child and to instruct the sage, and to whose benevolence the medical profession in this country, and humanity in general, are so much indebted,—should be made known, and will be received by our readers without apology for their insertion here.

"Dear Sir,—It is well known to those who have looked into the history of the celebrated Dean Swift, that from an early period of his life he was subject to attacks of what he himself and his biographers style vertigo. Whether these attacks were ever attended with other nervous symptoms, such as epilepsy, does not appear; although, from the expressions used by Mr. Monck Mason, that Swift 'was subject to a constitutional malady, of which he frequently experienced the ill effects,' and which he had reason to apprehend 'was in some degree hereditary,' this might be suspected. Swift himself attributed the origin of his disease to a surfeit of fruit,—'stone fruit,' says Sir Walter Scott,—'apples,' says Mr. Monck Mason. His temper, it is well known, grew, as life advanced, exceedingly irritable, till at length he became furiously insane, and ultimately fatuous.

"Dr. Beddoes(*a*) has hazarded the conjecture that 'one hy-

(*a*) Hygeïa: or Essays Moral and Medical, vol. iii. p. 187. Bristol, 1807.

pothesis," and "but one," both unfolds the nature of Swift's ailment, and accounts for his extraordinary conduct towards Mrs. Johnson and Miss Vanhomrigh. The harsh supposition has been repelled with becoming indignation by Sir Walter Scott, who justly observes, that "until medical authors can clearly account for and radically cure the diseases of their contemporary patients, they may readily be excused from assigning dishonourable causes for the disorders of the illustrious dead."

"It appears from the testimony of Dr. Delany, that in October, 1742, after Swift's frenzy had continued several months, his left eye swelled to the size of an egg, and the lid was so much inflamed and discoloured, that the surgeon who attended expected it to mortify. The extreme pain of the swelling kept him waking near a month, and during one week it was with difficulty that five persons prevented him, by mere force, from tearing out his eyes. At length the tumour perfectly subsided, the pain left him, and he recognised his friends and medical attendants. The surgeon was not without hopes he might once more enjoy society; but in a few days he sunk into a state of total insensibility, slept much, and could not, without great difficulty, be prevailed on to walk across the room. This state, which lasted some years, was the effect of water in the head. Mr. Stevens, a clergyman of his Chapter, pronounced this to be the case, and often entreated the Dean's friends and physicians to have him trepanned and the water discharged; a proposal to which, of course, no regard was paid, although the diagnosis turned out correct.

"For three years after the affection of the eye Swift remained nearly silent, in a hopeless state of fatuity, with short and occasional gleams of sensibility and reason. Sometimes he would try, evidently with pain, to find words, but not being able, he would fetch a sigh and remain silent.

"On the 19th of October, 1745, he died without the least pang or convulsion, in the seventy-eighth year of his age.

"That the brain was loaded with water is the only circumstance stated by Dr. Delany of the inspection after death.

"My object in addressing you on the subject of Swift's case, is to beg the favour of a communication, through the medium of the Quarterly Journal of Medical Science, of any further facts which may be recorded respecting it, either in printed books or in authentic manuscripts, and known to you or to any of your readers. It is at once evident how exceedingly important in a pathological view are the symptoms and appearances already known, and how desirable it would be to possess a more minute account of both. That such may have been drawn up by the medical gentlemen who attended Swift during his life, or who inspected his head after death, seems not unlikely, and, if preserved, will certainly prove of great interest. The repositories of the Deanery or of Trinity College may, perhaps, contain documents on the subject.

"The points to which, it is to be hoped, attention was directed are:—First, the cause of the exophthalmos; and whether or not connected with the interior of the cranium. Second, the state of the encephalon; and especially of the dura mater over the left orbit. Third, whether there was any tumour or other diseased structure prolonged from the orbit into the cranium, or *vice versâ*, or any absorption of the roof of the orbit.

"Should no further particulars be recovered, I trust the inquiry I have started will not appear altogether unreasonable, even at this length of time after the events to which it refers. Surely we have a better right to inquire, after the lapse of a century, into the real facts of his case, than the wit himself had to twit the doctors, and even anticipate their *post mortem* report of him, as he does in his 'Verses on his own Death:'

> "'The doctors, tender of their fame,
> Wisely on me lay all the blame.
> "We must confess his case was nice;
> But he would never take advice.

Had he been ruled, for aught appears,
He might have lived these twenty years:
For, when we open'd him, we found
That all his vital parts were sound."'

"I am, dear Sir, your's, &c.,
"W. Mackenzie.

"*Glasgow, August 15th*, 1846."

Let us now briefly enumerate such of the symptoms of Swift's disease, mental and corporeal, premonitory and well-established, as the records furnished by himself and his biographers are capable of affording us.

It may, we are free to confess, appear at first view an almost impossible task to write the history of Swift's case upwards of a century after his death: nevertheless, we have no hesitation in asserting that the following detail of symptoms, given chiefly in the words of the patient, afford us one of the best described, and certainly the very longest case of cerebral disease which we have ever met with, extending over a period of fifty-five years! The very extensive epistolary correspondence of this great man, and his familiar style of writing, as well as the publication of letters which were never intended for the public eye, have greatly assisted us in collecting materials for the history of his malady.

We have made every possible exertion to discover Mr. Monck Mason's authority, or reasons, for supposing Swift liable to any "hereditary disease," such as epilepsy, to which we apprehend he alludes, but without effect; and we are strongly inclined to believe that, like most gratuitous non-medical opinions, it had no other foundation than a conjecture of the author's. The Dean himself, a better authority than either Sir Walter Scott, Dr. Beddoes, or Mr. Mason, took a more rational view of the matter. Writing to Mrs. Howard, in 1727, he thus describes the commencement of his complaint: "About two hours before you were born,"—consequently in 1690,—"I got my *giddiness* by eating a hundred golden

pippins at a time, at Richmond; and when you were four years and a quarter old, bating two days, having made a fine seat about twenty miles farther in Surry, where I used to read—and, there I got my *deafness;* and these two friends have visited me, one or other, every year since; and, being old acquaintance, have now thought fit to come together."(*a*) Overloading the stomach in the manner described, and catching cold by sitting on a damp, exposed seat, were very apt to produce both these complaints,—neither of which, when once established, was likely to be easily removed from a system so nervous, and with a temper so irritable, and a mind so excessively active, as that of Swift's. From this period, a disease which, in all its symptoms and by its fatal termination, plainly appears to have been (in its commencement at least) *cerebral congestion,* set in, and exhibited itself in well-marked periodic attacks, which, year after year, increased in intensity and duration.

Lord Orrery says that "in compliance with the advice of his physicians, when he was sufficiently recovered to travel, he went into Ireland to try the effects of his native air: and he found so much benefit by the journey, that in compliance to his own inclination he soon returned into England."

In early life he was of remarkably active habits, and always exceedingly sober and temperate, if we except the instance of gluttony already related. From the date of his first attack he seems to have had a presentiment of its fatal termination; and the dread of some head affection (as may be gleaned from innumerable passages in his writings), seems to have haunted him ever afterwards, producing those fits of melancholy and despondency to which it is well known he was subject; while the many disappointments and vexations, both of a domestic and public nature, which he subsequently suffered, no doubt tended to hasten the very end he feared.

During his first residence at Sheen and Moor-Park, prior

(*a*) Letters of Swift. Dr. Hawkesworth errs in stating that it occurred in Ireland. Swift was then about twenty-three years of age.

to 1694, Scott says, "his studies were partially interrupted by bad health;" and then tells the story of the "surfeit of stone fruit," and the "coldness of stomach," &c., but on what authority, except this letter to Mrs. Howard, we are utterly at a loss to discover. The same biographer continues: "At one time he was so ill that he visited Ireland in hopes of experiencing benefit from his native air; but, finding no advantage from the change, he again returned to Moor-Park, and employed in his studies the intervals which his disorder afforded."

Various anecdotes illustrative of his eccentric habits and singular manner have been related of Swift; but as we do not think that they in any wise affect the present question, they are here altogether omitted. Moreover, these have been dwelt upon by some of his biographers apparently for the purpose of shewing how they led to the ultimate and melancholy fate which closed his "eventful history," and as exhibiting symptoms of incipient insanity; but, as we trust, a fair examination of his case will shew, Swift was not, at any period of his life, not even in his last illness, what is usually termed and understood as *mad*.

While living at his parish in Meath, enjoying the charms of a country life, engaged in the active exercise of his clerical duties, and consoled by the society of Stella and Mrs. Dingly, amidst the quiet of the willows of Laracor, and with his mind comparatively at ease, we do not hear of his making any complaint. But whenever he mixed much in society, especially in London or Dublin, he was subject to returns of his disease. Thus, in 1708, he writes to Archbishop King from Dublin: "I have been confined near two months this winter, and forbid pen and ink by my physician, though, thank God! I was more frightened than hurt. I had a colic about the year 1696(*a*) that brought me to extremity, and all despaired of my life, and the newsletters reported me dead. It began at the same time of the year, and the same way it did then, and the winters were much alike; and I verily believe had I not had the

(*a*) This must be a typographical error, the 6 should be a 0. See p. 389.

assistance of my old physician, Sir Patrick Dun, I should have run the same course, which I could not have supported: but with a little physic, and the Spa and Bath waters, I escaped without other hardships than keeping at home." In another communication he writes: "I was then for a long time pursued by a cruel illness that seized me at fits and hindered me from meddling in any business."

From 1710 to 1713 Swift resided in London for some months, and while there mixed much in politics and other exciting subjects. In his Journal to Stella at this period many of his symptoms are accurately noted. Excess in late hours seems always to have aggravated and often produced the uncomfortable feeling in his head. On the 27th October in that year, after giving an account of a dinner with Congreve, Sir R. Temple, Eastcourt, and other choice spirits of the day, he writes: "But now my head continues pretty well; I have left off drinking, and only take a spoonful mixed with water," &c.

October 31st.—"This morning, sitting in my bed, I had a fit of giddiness; the room turned round for about a minute, and then it went off, leaving me sickish, but not very. I saw Dr. Cockburn to-day, and he promises to send me the pills that did me good last year, and likewise has promised me an oil for my ear that he has been making for that ailment for somebody else."

November 1.—"I had no giddiness to-day; but I drank brandy, and have bought a pint for two shillings. I sat up the night before my giddiness pretty late, and writ very much, so I will impute it to that; but I never eat fruit nor drink ale."

November 24th.—"I have had no fit since the first; I drink brandy every morning and take pills every night." Other casual illnesses, but not referable to the disease in question, occurred to him; these, however, it is unnecessary to mention.

December 1st.—"I have had no fit since my first, although sometimes my head is not quite in good order." 9th.—"I never was giddy since my first fit, but I have had a cold," &c.

He remained free till the 13th of January, 1711, when he writes: "Oh! faith, I had an ugly giddy fit last night in my chamber, and have got a new box of pills to take, and hope I shall have no more this good while." During the last four days of January he had a return of his symptoms. "My head," he continues, "is not in order, and yet it is not absolutely ill, but giddyish, and makes me listless. I walk every day, and take drops of Dr. Cockburn, and have just done a box of pills, and to-day Lady Kerry sent me some of her bitter drink, which I design to take twice a day, and hope I shall grow better. My riding in Ireland keeps me well. I am very temperate, and eat of the easiest meats, as I am directed, and hope this malignity will go off; but one fit shakes me a long time."

Feb. 1st. "I was this morning with poor Lady Kerry, who is much worse in her head than I. She sends me bottles of her bitter, and we are so fond of one another because our ailments are the same. Do not you know that, Madame Stell? Have not I seen you conning ailments with Joe's wife and some others, sirrah? I walked into the city to dine, because of the walk; but I walked plaguy carefully for fear of sliding against my will."

In this notice of Lady Kerry's and Stella's, and also of Mrs. Howard's and other's anxiety on account of the complaints of their neighbours, we find the germ of that passage in the memorable Verses on his own Death, written twenty years after:

> "Yet should some neighbour feel a pain,
> Just in the parts where I complain;
> How many a message would he send,
> What hearty prayers that I should mend;
> Inquire what regimen I kept;
> What gave me ease, and how I slept?
> And more lament when I was dead,
> Than all the snivellers round my bed."(*a*)

(*a*) These verses were published the Wednesday after the Dean's death, in No. 157 of The Dublin Courant (October 23, 1745), a copy of which now lies before us.

February 4th.—" I avoid going to church yet for fear of my head, though it has been much better these last five or six days, since I have taken Lady Kerry's bitter."

February 13th.—" I have no fits of giddiness, but only some little disorders towards it: and I walk as much as I can. Lady Kerry is just as I am, only a great deal worse. I dined to-day at Lord Shelburn's, where she is, and we con ailments, which makes us very fond of each other." Throughout the entire period of his illness, active exercise, particularly walking, appears to have been of the greatest service to him. To this may be added rest, quiet, and avoidance of all excitement, as well as great abstinence in his regimen; while to the great mental excitement to which he was constantly subjected during his residence in London, at the period when he enjoyed the confidence of Harley, and engaged so actively in both politics and literature, may be traced several of his attacks; he himself, however, very justly ascribes several of his fits of giddiness and disorder of stomach to excess in eating and drinking. He dined with the minister on the 17th, and in his journal of the day following, he says: " My head has no fits, but is little disordered before dinner; yet I walk stoutly, and take pills, and hope to mend." From this and many other similar expressions, it is evident that unsteadiness of gait was a constant and well-marked symptom of his disease. During the remainder of this month he continued much in the same state. " No fits, but a little disorder every day, which I can easily bear, if it will not grow worse." We suppose his having so frequently used the word " fits," is the reason why some of his biographers erroneously believed he was subject to epilepsy.

April 9th.—He dined with Sir John Stanley, to meet Mr. St. John and Mr. Ganville, but the company happening to be much larger than he supposed it would be, he says: " We were not as easy as I intended. My head is pretty tolerable, but every day I feel some little disorders. I have left off snuff since Sunday, finding myself much worse after taking a good deal

at the Secretary's. I would not let him drink one drop of Champagne or Burgundy without water, and in compliment I did the same myself." It will be remembered that Harley was then but slowly recovering from the wound he received from Guiscard. On the 16th he "dined with Stratford, and drank tokay," the effect of which he felt that night and all next day, yet it did not prevent his accepting invitations. On the 18th, however, he seems to have grown worse, and made some slight mistake in dating his journal, apparently the first symptom of that loss of memory of which he speaks so feelingly twenty-five years after. "I dined with Lord Anglesea to-day, but did not go to the House of Commons about the yarn; my head was not well enough. I know not what is the matter; it has never been thus before; two days together giddy from morning till night, but not with any violence or pain; and I totter a little, but can make shift to walk. I doubt I must fall to my pills again; I think of going into the country a little way." 21st.—"My head, I thank God, is better, but to be giddyish three or four days together mortified me. I take no snuff, and will be very regular in eating little, and the gentlest meats. Well, we dined to-day according to appointment. Lord Keeper went away at near eight, I at eight, and I believe the rest will be fairly fuddled. Young Harcourt, Lord Keeper's son, began to prattle before I came away. It will not do with Prior's lean carcass. I drink little, miss my glass often, put water in my wine, and go away before the rest, which I take to be a good receipt for sobriety." This advice he afterwards put in rhyme. Besides the pills ordered by Dr. Cockburn, the only medicine he appears to have taken was "some herb snuff, prescribed by Dr. Radcliffe."

The deafness which attended his first attack did not, up to this period, form a symptom of his illness in 1710 and 1711; but on the 28th he writes: "My ears have been, these three months past, much better than any time these two years; but now they begin to be a little out of order again. My head is

better, though not right; but I trust to air and walking." He then took long walks every day, and, by the advice of Dr. Radcliffe, left off Bohea tea, which he had observed to disagree with him frequently before. Swift was on very intimate terms with Drs. Freind, Chamberlain, and Arbuthnot, but it does not appear that he consulted either of them. Dr. Cockburn was his general attendant. He was no great advocate for physic, as we may learn from a passage in one of his letters about this period: "Fig for your physician and his advice, Madame Dingley; if I grow worse I will; otherwise I will trust to temperance and exercise. Your fall of the leaf! What care I when the leaves fall? I am sorry to see them fall with all my heart; but why should I take physic for that?"(*a*)

During the month of May he removed to Chelsea, and seems to have benefited by it. On the 23rd of that month he writes: "I thank God I yet continue much better since I left town; I know not how long it may last. I am sure it has done me some good for the present. I do not totter as I did, but walk firm as a rock, only once or twice for a minute. I do not know how; but it went off and I never followed it."

The summer of 1711 was excessively hot, and Swift suffered extremely from it, yet he does not appear to have ascribed his illness, as do so many patients of the present day, to "the change of the weather," but in the following passage certainly took a very correct and philosophical view of his case: "I never impute any illness or health I have to good or ill weather, but to want of exercise or ill air, or something I have eaten, or hard study, or sitting up; and so I fence against those as well as I can."

He returned to London in July; and here he details an additional symptom highly characteristic of his disease: "I

(*a*) The advice of Mrs. Dingley is still followed in many parts of Ireland. Several people not only take medicine but have themselves bled from one or both arms in spring and autumn. The country bleeders make a considerable income of this.

fear I shall have the gout; I sometimes feel pain about my feet and toes. I never drank till within these two years, and I did it to cure my head. I often sit evenings with some of these people, and drink in my turn; but I am now resolved to drink ten times less than before; but they advise me to let what I drink to be all wine, and not to put water in it."

September 1st.—"My head is pretty well, only a sudden turn at any time makes me feel giddy for a moment, and sometimes it feels very stuffed; but if it grows no worse I can bear it very well." This letter was written from Windsor, where he then resided, the air of which, as well as the walking exercise, both there and at Kensington, appear to have been of much service to him.

Swift's deafness was at first in but one ear; he thus alludes to it in a communication of the 7th of the same month. "Did I ever tell you that the Lord Treasurer hears ill with the left ear, just as I do? He always turns the right; and his servants whisper to him in that only. I dare not tell him that I am so too, for fear that he should think that I counterfeited to make my court." Upon the 8th he writes: "God be thanked that ugly numbing is gone: my head continues pretty well."

October 21st.—"My head has ached a little in the evenings, but it is not of the giddy sort, so I do not much value it." Again, on the 24th: "I had a little turn in my head this morning, which, though it did not last above a minute, yet, being of the true sort, has made me as weak as a dog all this day. 'Tis the first I have had this half-year. I shall take my pills if I hear of it again."

November 4th.—"I plainly find I have less twichings about my toes since these ministers are sick and out of town, and that I don't dine with them. I would compound for a light, easy gout to be perfectly well in my head." During the next three months it does not appear that he had any serious return of his disorder, although his head was not quite free for some days in the beginning of February. From an expression in

one of his letters at this period, we are inclined to think that he had occasional attacks of hæmorrhoids, the hæmorrhage from which may have acted beneficially on his head. Upon the 8th he writes: "My disorder is over; but blood was not from the p—les."

February 24th.—"I dined with the Secretary, and found my head very much out of order, but no absolute fit; and I have not been well all this day. It has shook me a little. I sometimes sit up at Lord Masham's, and have writ much for several days past; but I will mend both."

On the 29th of March, 1711–12(*a*), he had a severe attack of what at first appeared to be acute rheumatism, but which ended in a cutaneous eruption not unlike eczema. His own account of the matter is very full: "I am plagued with these pains in my shoulder; I believe it is the rheumatism." He dined out, and drank three or four glasses of champagne "by perfect teasing, though it is," he adds, "bad for my pains; but if it continues I will not drink any wine without water till I am well. I never would drink any more of it were it not for my head, and drinking has given me this pain. I will try abstemiousness for a while." He applied Hungary water to his shoulder. On the 30th the pain removed to his neck and collar-bone, and he seems to have suffered severely. From the first seizure of the disease till the 8th of April he writes: "I have been extremely ill, though I twice crawled out a week ago; but am now recovering, though very weak. The violence of the pain abated the night before last. The pain increased with mighty violence in my left shoulder and collar-bone, and that side my neck. On Thursday morning appeared great red spots in all those places where any pain was, and the violence of the pain was confined to my neck behind, or a little on the left side; which was so violent that I had not a minute's rest, nor hardly a minute's sleep, in

(*a*) The style had not then been altered; we have, however, with this exception, reduced the dates to the modern new style.

three days and nights. The spots increased every day, and red little pimples, which are now grown white, and full of corruption, though small: the red still continues, too, and most prodigious hot and inflamed. The disease is the shingles. I eat nothing but water-gruel, am very weak, but out of all violent pain. The doctors say it would have ended in some violent disease if it had not come out thus. I shall now recover fast. I have been in no danger of life, but miserable torture. I must purge and clyster after this."

On the 24th of April he writes again: "This day, just a month since, I felt the pain on the tip of my left shoulder, which grew worse, and spread for six days; then broke all out by my collar and left side of my neck in monstrous red spots, inflamed, and these grew to small pimples. For four days I had no rest, nor nights, for a pain in my neck, then I grew a little better; afterwards, where my pains were, a cruel itching seized me, beyond whatever I could imagine, and kept me awake several nights. I rubbed it vehemently, but did not scratch it; then it grew into three or four great sores, like blisters, and run: at last I advised the doctor to use it like a blister, so I did with melilot plasters, which still run, and am now in pain enough, but am daily mending."

May 10th.—"My pain continues still in my shoulder and collar; I keep flannel on it, and rub it with brandy, and take a nasty diet drink. I still itch terribly, and have some few pimples. I am weak, and sweat, and then the flannel makes me mad with itching; but I think my pain lessens. A journal while I was sick would have been a noble thing, made up of pain and physic, visits and messages; the two last were almost as troublesome as the two first. One good circumstance is that I am grown much leaner. The doctors say they never saw anything so odd of the kind; they were not properly shingles, but *herpes miliaris*, and twenty other hard names. I can never be sick in the common way; and as to your notion of its coming without pain, it neither came, nor stayed, nor

went, without pain, and the most pain I ever bore in my life." Again, in answer to an inquiry of Stella's, he writes: "No, simpleton, it is not a sign of health, but a sign that if it had not come out some terrible fit of sickness would have followed. I drink nothing above wine and water."(*a*)

"*My left hand is very weak, and trembles*, but my right side has not been touched."(*b*) On the 31st he writes: "My pains continuing still, though with less violence." In the beginning of June he removed to Kensington, and writes from thence on the 17th: "My shoulder is a great deal better; however, I feel violent pain in it, but I think it diminishes, and I have cut off some slices from my flannel."

While he remained in the country it was necessary, for his own personal projects, that he should still mix in the society of the Court, but he freely acknowledges its ill effects upon him. Dr. Cockburn advised him to take a little wine. Several allusions to this teasing complaint will also be found in Swift's correspondence with Archbishop King; but expressed in nearly the same terms as those contained in the journal to Stella. This attack of herpes left him exceedingly weak, and his convalescence was very much prolonged. In addition, he suffered from another fit of giddiness while at Windsor, in September, for which he took emetics. "I have eat," he says, "mighty little fruit, yet I impute my disorder to that little, and shall henceforth wholly forbear it."

October 9th.—"I have left Windsor these ten days, and am deep in pills with assafœtida, and a steel bitter drink; and I find my head much better than it was. I was very much discouraged, for I used to be ill for three or four days together, ready to totter as I walked. I take eight pills a day, and have taken, I believe, a hundred and fifty already." On the 28th

(*a*) The term "simpleton" in this passage was but an expression of endearment, as may be gleaned from the context of his Journal to Stella.

(*b*) It will be remembered that it was his left eye that was subsequently affected.

his journal continues: "I have been in physic this month, and have been better these three weeks. I stopped my physic, by the doctor's orders, till he sends me further directions." During the next three months he remained free from any serious attack.

Towards the end of January, 1713, he tried the Spa waters; but they did not agree with him, they seemed to increase his vertigo, and produced œdema of the legs. The preparation of aloes, which he commenced, seemed to agree better with him. In part of his correspondence at this period he acknowledges that his memory had become impaired, and he constantly forgot appointments. By the advice of Lady Orkney he tried the preparation which we now know as the Pulvis Aloes c. Canella, toward the end of March, and says of it: "It is hiera picra, two spoonfuls devilish stuff!" In the beginning of May he was appointed Dean of St. Patrick's, and returned to Ireland the end of that month. And here the journal to Stella ends.

In the foregoing, and in part of the subsequent history of Swift's case, it may be said that there are many repetitions and much tautology of expression. With regard, however, to the former, we have the authority of the report of cases constantly published in books and periodicals, where the repetitions which occur in the daily notes of cases are fully as numerous, and that too of persons in whom the public and the profession take no more interest than what arises from the peculiarity of their diseases: and as to the latter, we have chosen rather to give the words of the illustrious patient himself, than to attempt any paraphrase of our own.

During the few days which the Dean passed in Dublin he had an attack of his old complaint; he proceeded, however, as soon as possible, to the country, from whence, after his installation in the Deanery, in 1713, he says: "I was at first horribly melancholy, but it begins to wear off, and change to dulness." Writing to Archbishop King, on the 16th of July, he continues:

"I have been so extremely ill with the return of an old disorder in my head that I was unable to write to your Grace." He was confined to his room at this period for a fortnight, but appears to have recovered his health by a short sojourn at his former parish where Stella then resided.

In his Imitations of Horace's Epistles, he thus humorously, but, in all probability, truly, describes his appearance after this attack:

> "But was so dirty, pale, and thin,
> Old Read would hardly let him in."

The gloomy shadows of the future perpetually crossed his path: his new locality in Kevin-street,—the disagreements of his Chapter,—the loss of his friends and companions in the stirring scenes he so lately left,—all tended to produce discontent, and acted most injuriously on his desponding imagination. He speaks of seeing his "life so fast decline,"—

> "Removed from kind Arbuthnot's aid,
> Who knows his art, but not his trade;
> Preferring his regard to me
> Before his credit or his fee."(*a*)

These attacks continued during the remainder of that year and part of the next. From 1714 to 1719, we have but scanty means of ascertaining his state, for the correspondence during this period, which has come down to us, is chiefly of a business character, and does not enter into those personal details from which the state of his health may be gleaned. It is scarcely possible, however, to conceive that his head remained free for so long a time.

In December, 1718, Dr. Arbuthnot writes to him: "Glad at my heart should I be if Dr. Helsham(*b*) or I could do you

(*a*) Dr. Arbuthnot, physician to Queen Anne, was a native of Scotland, a very elegant scholar and writer, and greatly attached to Swift.

(*b*) Dr. Helsham, a distinguished physician in this city in the time of Swift, to whom, it appears, he was medical adviser after the death of Sir P. Dun, which occurred in 1717. He was also a very elegant scholar and writer,

any good. My service to Dr. Helsham; he does not want my advice in the case. I have done good lately to a patient and a friend in that complaint of a vertigo, by cinnabar of antimony and castor made up into boluses with confect. of alkermes. I had no great opinion of the cinnabar, but trying it amongst other things, my friend found good of this prescription. I had tried the castor alone before, not with so much success. Small quantities of *Tinctura Sacra* now and then will do you good."

From the 6th of January to the 19th of February, 1719, he was confined by a severe attack. In May, he writes to Lord Bolingbroke: "My health is somewhat mended, but at best I have an ill head and an aching heart."

In 1720 circumstances of a political nature occurred, which, by occupying the mind of Swift, and again engaging his powerful energies, appear to have acted salutarily with respect to his bodily health. Literature, politics, and the society of his friends, dispelled for a time his melancholy. His deafness at this period was not the least distressing portion of his malady: "What if I should add," he says, "that once in five or six weeks I am deaf for three or four days."

In May he had a severe attack of ague, which even incapacitated him from writing. It continued for a whole year, although, he writes to Mr. Cope, "I am still under the discipline of the bark to prevent relapses."

In September, 1721, he removed to Gaulstown for the benefit of his health, from whence he writes to Mr. Worrall, his sub-dean: "I have now and then some threatenings with my head; but have never been absolutely giddy above a minute, and cannot complain of my health, I thank God."

and several of his verses have been published, along with those of Sheridan and Delany, in Swift's works.

The Tinctura Sacra mentioned by Arbuthnot consisted of aloes, cardamoms, ginger, and Spanish white wine. It has not been known under this name for half a century at least.

In the correspondence with Vanessa there is very little allusion made to his illness. About this period the following notices, however, should not be omitted. Writing to her from Gaulstown, on the 15th of July, 1721, he says: "If you knew how I struggle for a little health, what uneasiness I am at in riding and walking, and refraining from every thing agreeable to my taste, you would think it but a small thing to take a coach now and then and converse with fools and impertinence, to avoid spleen and sickness."

In the summer of 1722 he removed to the country for the benefit of the air;—and some of his letters to Vanessa at this period contain notices of his state of health, but they allude more to the condition of his mind than the precise state of his bodily ailments. Thus, in his letter from Lough Gall, on the 13th of July, he writes: "I fly from the spleen to the world's end." Coffee, it seems, was a favourite beverage with both, but it produced too much excitement in the Dean to be often resorted to. "The best maxim I know in life is to drink your coffee when you can, and, when you cannot, be easy without it. * * I am not cheerful enough to write, for I believe that coffee once a week is necessary to that. * * I gave all possible way to amusements, because they preserve my temper as exercise does my health; and without health and good humour I would rather be a dog. I have shifted scenes oftener than I ever did in my life, and I believe have lain in thirty beds since I left the town."

Gay, the poet, writing to him, in February, 1723, entreats of him to come to England for change of air; and continues, Dr. Arbuthnot "thinks, that your going to Spa, and drinking the water there, would be of great service to you, if you have resolution enough to take the journey." The death of Vanessa occurred in this year, and the memorable instance of his outburst of passion, the last time he saw this lady, can scarcely, we think, be attributed solely to the effects of temper, but must, in part at least, have been caused by disease.

Three years later, after Stella's first illness, Sir Walter Scott, generously accounting for "the unrestrained violence of his feelings," writes: "To this must be added his personal health, broken and worn down by the varying attacks of a frightful disorder; his social comfort destroyed by the death of one beloved object, and the daily decay and peril of another."

Writing to Lord Carteret, in September, 1724, Swift says, "being ten years older than when I had the pleasure to see your Excellency last, by consequence, if I am subject to any ailments, they are now ten times worse; and so it has happened; for I have been this month past so pestered with a return of the noise and deafness in my ears, that I had not spirit to perform the common offices of life." In this letter he likewise regrets his inability to change the climate, which, he seems to think, would do him good. In the April following he complains bitterly of these two symptoms, but by removal to his friend Delany's place, at Quilca, he appears to have recovered for the time being. In the August of this year he writes: "My deafness has left me above three weeks, and therefore I expect a visit from it soon; and it is somewhat less vexatious here in the country, because none are about me but those who are used to it."

In the August of the same year, he informs Mr. Tickell, in a letter which relates to the trial of Mr. Proby, son to the Surgeon-General of that time, that he had been tormented with an old vexatious disorder of a deafness and noise in his ears, which, he continues, "has returned, after having left me above two years, and makes me insupportable to others and myself." It left him, however, during the month of September, but returned again in October, so that he says, "I am fit for nothing but to mope in my chamber."

In November, 1725, he writes to the same person: "I have got slowly out of a favourite disorder that hath confined me these ten days." Upon the 13th of the month, however, he was able to enjoy society with a few select friends.

In 1726 Swift visited London, but his correspondence at

this time is so fully occupied with the illness of Stella(*a*), which then assumed a very threatening aspect, that we are unable to glean anything of his own state of health from it, except those expressions which speak of his great dejection of spirits. After Stella's first recovery, while returning to Ireland, he suddenly got rid of his giddiness at Holyhead.

He again returned to London, and writes to Dr. Sheridan, in June, 1727: "My stomach is pretty good, but for some days my head has not been right; yet it is what I have been formerly used to." The next month, however, he had a decided attack, brought on by partaking of "cider, champagne, and fruit." In August his deafness increased to a greater extent than he had ever before experienced, accompanied by the giddiness and tottering, to which we have so often alluded, owing to which he was unable to write for any length of time. The letter to Sheridan, which is our authority for this attack, contains the following prophetic passage: "I believe this giddiness is the disorder that will at last get the better of me." By removing to his friend Pope's residence, at Twickenham, he got somewhat better; but the sad accounts of Stella's last and fatal illness quite unmanned him, and aggravated both his bodily and mental sufferings. "My weakness, my age, my friendship, will bear no more." And again: "I walk like a drunken man, and am deafer than ever you knew me. * * * These are the perquisites of living long: the last act of life is always a tragedy at best, for it is a bitter aggravation to have one's best friend go before them." These, and such like expressions, tell better than any word of our's his state of mind and body. His friends in Ireland, becoming alarmed about his state, wrote upon the subject to Pope, who then watched him with the warmest solicitude, and who, as well as Arbuthnot, saw him daily, and endeavoured to soothe his excited feelings.

(*a*) The poetical names of Stella and Vanessa have now become so much better known than those of Miss Johnston and Miss Vanhomrigh, that we have employed them in this paper.

On learning the sad tidings about Stella, and not wishing, perhaps, that Pope (with whom he was residing), and other friends, should witness his despair, he walked into London, and shut himself up in private lodgings. To this most natural expression of feeling, Johnson, the most malevolent of all Swift's biographers, labours to assign other motives; but Pope's correspondence on the subject sets the matter in its true light. He was unable to leave London till the beginning of October. The day before he left the English capital, he again, however, suddenly recovered his hearing at an inn in Aldersgate-street; on which circumstance Gay and Pope, in a joint letter which they wrote to the Dean, congratulating him on his improved health, remark: "No doubt, your ears knew there was nothing worth hearing in England."

"Upon the approach of winter, Swift," says Mr. W. Monck Mason, "formed a design of passing that season in the South of France: he hoped the air of that mild climate would mitigate the symptoms of his recurring disorder; and was actually upon the point of carrying his resolution into effect, when the unexpected news of the King's death caused him to part from it."

During the few months which intervened between his return to Ireland and the death of Stella, which occurred on the evening of the 28th of January, 1728, Swift, in his correspondence, speaks little of himself, though it may be gleaned that he was several times confined to his chamber. "Swift was now," says Sir Walter Scott, "in a manner alone in the world, afflicted by many of those varied calamities with which, to use his own words, the Author of our being weans us gradually from our fondness of life, the nearer we approach the end of it. Disease and decay of nature,—the death of many friends, and the estrangement or ingratitude of more,—a want of relish for earthly enjoyments, with a general dislike for persons and things daily increasing upon him,—passions too readily irritable, and the keen sensations of remorse after having extrava-

gantly indulged them,—all these evils combined to darken his future prospect; and the gleams of cheerfulness and enjoyment which yet occasionally gilded his way grew fewer and more languid as his path tended downwards, until he reached the sad point beyond which all was 'second childishness and mere oblivion.'"

Gay, writing to him on the March following the death of Stella, says: "I am extremely sorry that your disorder has returned; but as you have a medicine which has twice removed it, I hope, by this time, you have again found the good effects of it." What this medicine was we have not been able to discover; but that it was a recipe of some kind, and not change of air, we learn from Mrs. Howard's having requested a copy of it. During the spring and summer he passed most of his time in the county of Armagh; writing from whence to Dr. Sheridan, on the 18th of September, he says: "My continuance here is partly owing to indolence, and partly to my hatred to Dublin. I am in a middling way, between healthy and sick, hardly ever without a little giddiness or deafness, and sometimes both,"—natural expressions in a man who had so lately suffered the bereavement which Swift did, and who was then without society or amusement in the dull village of Market-hill, where he remained till the beginning of the following year, when he had another very severe attack, which continued during the month of January. In a communication to Mr. Worrall, of this date, he says: "I have been now ill about a month, but the family are so kind as to speak loud enough for me to hear them; and my deafness is not so extreme as you have known, when I have fretted at your mannerly voice, and was only relieved by Mrs. Worrall." Nevertheless, he was well enough to enclose in this letter the manuscript for an Intelligencer.

Pope, in writing to Dr. Sheridan about this time, says that the Dunciad "had never been writ but at his request, and for his deafness; for, had he been able to converse with me, do you think I had amused my time so ill?" He left Sir Arthur

Atcheson's, at Market-hill, and returned to Dublin in February, having been altogether away about eight months, during which time he had half-a-dozen returns of the giddiness and deafness, each of which lasted about three weeks. "This disorder," he states, "neither hinders my sleeping, nor much my walking; yet," he complains, in common with all deaf persons(*a*), "it is the most mortifying malady I can suffer. When it is on me, I have neither spirits to write or read, think or eat, but I drink as much as I like, which is a resource you" (Mr. Pope) "cannot fly to when you are ill; and I like it as little as you, but I can bear a pint better than you can a spoonful." From this it would appear that Swift was not, in later life, as abstemious as he had been years previously, or as, indeed, the progress of his malady required he should be.

Some months now elapsed without any decided attack, yet his head was never quite free from giddiness, which generally increased towards night, but for half a year he had no return of his deafness. He again had recourse to horse exercise, which, no doubt, had a great effect in improving his health. This improved condition continued till 1730, when, from the following paragraph in Dr. Arbuthnot's letter, received the 13th November, we suppose he had another attack: "The passage in Mr. Pope's letter, about your health, does not alarm me: both of us have had the distemper these thirty years. I have found that steel, the warm gums, and the bark, all do good in it. Therefore, first take the vomit A; then, every day, the quantity of a nutmeg, in the morning, of the electuary marked B; with five spoonfuls of the tincture marked D. Take the tincture, but not the electuary, in the afternoon. You may

(*a*) The morose, discontented, and unhappy temper of some persons affected with deafness, particularly if they have not much resource within themselves, is frequently expressed in their looks. The contrast in society between the frown of the partially deaf and the smile of the totally blind is very remarkable; there are, however, bright exceptions to the contrary in persons of superior understanding, and in those who, being completely deaf, are not annoyed by hearing only a portion of the conversation.

take one of the pills marked C, at any time when you are troubled with it; or thirty of the drops marked E, in any vehicle, even water. I had a servant of my own that was cured merely with vomiting. There is another medicine not mentioned, which you may try; the pulvis rad. valerianæ sylvestris, about a scruple of it twice a day. How came you to take it in your head that I was queen's physician? When I am so, you shall be a bishop, or anything you have a mind to. Pope is now the great reigning poetical favourite.

"I recommended Dr. Helsham to be physician to the Lord Lieutenant. I know not what effect it will have. My respects to him and Dr. Delany.

"A.—℞. Pulv. rad. ipecacoanæ, ℈j.

"B.—℞. Conserv. flavedin. aurant. absynth. Rom. ana ʒvj. rubigin. martis in pollin. redact. ʒiij. syrup e succo kermes, q. s.

"C.—℞. As. fœtid. ʒij. tinctur. castor. q. s. M. fiant pilulæ xxiv.

"D.—℞. Cortic. Peruviani elect. rubigin. martis ana ʒj. digere tepidè in vini alb. Gallic. lb. ij. per 24 horas: postea fiat colatura.

"E.—℞. Sp. cor. cerv. sp. lavendul. tinctur. castor. ana ʒij. Misce."(*a*)

Notwithstanding the very extensive correspondence of Swift, greater than that of any other writer we are acquainted

(*a*) In a note to this prescription of Arbuthnot's we found the following in Scott's edition: "As these receipts may possibly be useful to some persons troubled with the Dean's complaint of giddiness, Dr. Arbuthnot's receipt of bitters, for strengthening the stomach, is added.

"Take of zedoary root, one drachm; galangal and Roman wormwood, of each, two drachms; orange peel, a drachm; lesser cardamom seeds, two scruples. Infuse all in a quart of boiling spring water for six hours; strain it off, and add to it four ounces of greater compound wormwood water.—H."

We have copied all these prescriptions exactly as they were printed.

with, which has been collected and published by his several biographers, there are still many letters and several poems of his which have never been printed. Among the former we may enumerate his correspondence with Knightly Chetwode, Esq. (which ranges between 1714 and 1731), from whose descendant(*a*) we have received the following passage, contained in a letter dated Dublin, 23rd November, 1727: "You tell me that, upon my last leaving Ireland, you supposed I would return no more, which was probable enough, for I was nine weeks very ill in England, both of giddiness and deafness, which latter being an uncomfortable disorder, I thought it better to come to a place of my own than be troublesome to my friends or living in lodging, and this hastened me over, and by a hard journey I recovered both my aylments." In another letter to the same gentleman, dated at Quilca, July 19th, 1725, he writes: "I came here for no other business but to forget and be forgotten. I detest all news or how the world passes. I am getting again into a fit of deafness; the weather is so bad, and continues so beyond any example in memory, that I cannot have the benefit of riding, and am forced to walk perpetually."

In addition to his bodily ailments, Swift evidently sank in spirits after the year 1730; and of this his friends seemed quite aware. Lord Bolingbroke, writing to him in January, 1731, thus alludes to this circumstance: "I begin my letter by telling you that my wife has been returned from abroad about a month, and that her health, though feeble and precarious, is better than it has been these two years. She is much your servant, and as she has been her own physician with some success, imagines she could be your's with the same. Would to God you was within her reach. She would, I believe, prescribe a great deal of the *medicina animi*, without having re-

(*a*) Edward Wilmot Chetwode, Esq., of Woodbrook, Portarlington. We wish our friend could be persuaded to publish this interesting correspondence: it is a debt he owes his ancestor, his country, and himself.

course to the books of Trismegistus. Pope and I should be her principal apothecaries in the course of the cure; and though our best botanists complain that few of the herbs and simples which go to the composition of these remedies are to be found at present in our soil, yet there are more of them here than in Ireland; besides, by the help of a little chemistry, the most noxious juices may become salubrious, and rank poison specific." And again, in his own letter of the 12th of June, 1731, to Pope, we read the same: "I doubt habit has little power to reconcile us with sickness attended by pain. With me the lowness of spirits has a most unhappy effect. I am growing less patient with solitude, and harder to be pleased with company, which I could formerly better digest, when I could be easier without it than at present. * * * I grow every day more averse from writing, which is natural; and, when I take a pen, say to myself a thousand times, '*Non est tanti.*' My poetical fountain is drained, and, I profess, I grow gradually so dry, that a rhyme with me is almost as hard to find as a guinea; and even prose speculations tire me almost as much."

"For poetry, he's past his prime,
He takes an hour to find a rhyme."(*a*)

The Dean, however, it must be remembered, was then in his sixty-fourth year.

On the 29th of this month he writes to Mr. Gay: "The giddiness I was subject to, instead of coming seldom and violent, now constantly attends me more or less, though in a more peaceable manner, yet such as will not qualify me to live among the young and healthy." This latter alludes to an invitation to visit the Duchess of Queensbury, near Bristol. The poor Dean was quite conscious at this time (as may be gleaned from his correspondence) of his increasing peevishness of temper, as well as those outbursts of passion related by his biographers. Yet neither in his expressions, nor the tone of his writing, nor

(*a*) Verses on his own death, written two months later.

from an examination of any of his acts, have we been as yet able to discover a single symptom of insanity, nor aught but the effects of physical disease, and the natural wearing and decay of a mind such as Swift's,—hastened, perhaps, by disappointed ambition,—the bereavement of his friends,—public ingratitude,—the want of those companions, with tastes and habits suited to his own, with whom he had so long enjoyed the most friendly intercourse,—and the collapse ensuing upon the retirement from those exciting political, as well as literary matters, in which he had previously engaged. "*Vertiginosus, inops, surdus, male gratus amicis*," was an expression in which he often indulged. Neither the character of this paper, nor the space which we are enabled to allot to it, permits us to allude to the tone or style of his writings at this period; but certainly, although they do not, during the few following years, exhibit the same mental vigour as some of his earlier productions, they certainly in no wise countenance the opinion that any aberration of intellect had taken place.

In the November of 1731 he wrote the memorable and prophetic verses on his own death. Some of these are so descriptive of his condition at this time that we cannot refrain from quoting them here:

> "See how the Dean begins to break,
> Poor gentleman, he droops apace,
> You plainly find it in his face;
> That old vertigo in his head
> Will never leave him till he's dead;
> Besides, his memory decays,
> He recollects not what he says."

That Swift was well aware of the disease under which he laboured, and fully expected the very conclusion to which it arrived, there can be no manner of doubt. The following notable instance of this is well authenticated: Dr. Young, the author of the Night Thoughts, relates, "that walking out with Swift and some others about a mile from Dublin, he suddenly

missed the Dean, who had stayed behind the rest of the company. He turned back, in order to know the occasion of it, and found Swift at some distance, gazing intently at the top of a lofty elm, whose head had been blasted. Upon Young's approach he pointed to it, saying, 'I shall be like that tree; I shall die first at the top.'"(*a*) This occurred many years previously. Byron had a similar feeling, and more than once spoke of "dying, like Swift, at the top first."(*b*)

In the early part of 1732 Swift hurt his leg, and the lameness alluded to in several of his letters at this period was owing to this cause.

In February, 1733, he writes to Lord Oxford: "I am just recovering of two cruel indispositions of giddiness and deafness after seven months. I have got my hearing; but the other evil still hangs about me, and, I doubt, will never quite leave me until I leave it." And this continued until the 20th March, so as to prevent his engaging in any business, or even answering his letters; and the death of Gay, which occurred shortly before this, served materially to increase his lowness and despondency. He again resumed his drops and bitters towards the end of the month, but completely gave up dining out. "I humdrum it either on horseback, or dining, or sitting the evening at home, endeavouring to write, but write nothing, merely out of indolence and want of spirits." The Dean used to walk at this time a great deal, and occasionally got into excessive heats by so doing. In one of his letters to Mr. Forde he complains of having lost half his memory, and all his invention; and to Pope he says: "When I was of your age I thought every day of death; but now every minute: and a continual giddy disorder, more or less, is a greater addition than that of my years." All his friends at this time endeavoured to persuade him to go to Spa or Bath, but he seems to have lacked energy for the undertaking, and says, in answers to pressing invitations from

(*a*) Nichols's edition of Sheridan's Life of Dr. Swift, vol. i. p. 284.

(*b*) "The Infirmities of Genius," by R. R. Madden, M. D., vol. ii. p. 157.

his English friends, "I declare my health is so uncertain that I dare not venture among you at present." This condition of health remained permanent during all the summer of 1733. The Dean occasionally resorted to emetics when his attack of giddiness came on, although at this period it does not appear to have been produced by derangement of the stomach as much as formerly. "Those sort of disorders," says Mr. Forde, in his letter to him in November, "puzzle the physicians every where; and they are merciless dogs in purging and vomiting to no purpose when they do not know what to do. I heartily wish you would try the Bath waters, which are allowed to be the best medicine for strengthening the stomach." During the last months of this year, Swift's gloom and despondency increased; and he had scarcely a friend about him whose society he could enjoy. Sheridan and Delany had both left Dublin, and his principal amusement in the evening was playing backgammon with Mrs. Worrall.

The two most pressing symptoms of his disorder(*a*) now scarcely ever left him; but in the spring of 1734 he again improved in health, spirits, and appearance. Still his indolence and apathy increased. His regimen was remarkably simple: his breakfast consisted in a bowl of rice-gruel; and he adds, in a letter to Miss Hoadly, daughter to the Archbishop of Dublin,

(*a*) The following curious prescription was found endorsed in the Dean's handwriting:

"R. *Nov. 3d*, 1733. *Dr. Ratcliff's Rec^t. for Deafness, sent by my Lady Moncastell.*

"Docter Ratcliff's prescription for a noisse in the head and deffness, proseeding from a cold moyst humor in the head.

"Take a pint of sack whay, make very clear, halfe sack and halfe water, boyle in it sum plain reael sage, and a sprige of Rossmery; take it gowing to rest, with thirty or forty drops of spirit of hartshorn, continue it as long as you find benifet by it, expectly the wintor seson; he may swetn or not with sirop of Cowslep. He orderd allsoe a spice capp: to be made of clowes, masse, and *pepper mingled finely*, pownded, and put betwen too silke, and quleted to wear next the head, and for a man to be sowdd within side his wigg."

"I am wholly a stranger to tea and coffee, the companions of bread and butter." The concluding portion of this letter is so apposite to the present times, that though it does not bear upon the subject in hand, we here insert it. "I hope and believe my Lord Archbishop will teach his neighbouring tenants and farmers a little country management. And I lay it upon you, madam, to bring housewifery in fashion among our ladies; that by your example they may no longer pride themselves on their natural or affected ignorance."

The tottering which first attacked him in the year 1711, returned again in November, 1734: and, to increase his misfortunes, his eyesight at this period began to fail, and from some whim Swift had a great dislike to the use of spectacles. Two of the avenues both of knowledge and amusement being thus shut out, need we wonder that the poor Dean's temper increased in fretfulness, and occasionally induced him to give way to those outbursts of passion which have been related of him. His *Medicina Gymnastica*, as it was termed by his friends, no longer alleviated his malady, or afforded him amusement. He well knew from experience the beneficial effects of active exercise upon his distressing complaint, and when he was not able to go abroad, he sometimes enjoyed it by chasing his friends up and down stairs, and through the large apartments in the deanery, "till he had accomplished his usual quantity of exercise." This anecdote has been related by some writers upon his character for the purpose of proving incipient insanity, but with what force we are utterly at a loss to discover, particularly as his writings and correspondence at this period exhibit a perfectly unimpaired mind.

The following quotations from the Dean's memorable letter to Mr. Blashford, gives the reader so good an idea of its author and his habits, that we here transcribe them:

"There is an inhabitant of this city, of whom I suppose you have often heard. I remember him from my very infancy, but confess I am not so well acquainted with him as in pru-

dence I ought to be; yet I constantly pretend to converse with him, being seldom out of his company, but I do not find that our conversation is very pleasing to either of us. His health is not very good, which he endeavours to mend by frequent riding, and fancies himself to find some benefit by that exercise, although not very effectual. He intended, in the pursuit of health, to have gone a long northern journey, and to have stayed there a month; but his friends (who are very few), hearing that the place where he proposed to reside was not proper for riding, diverted him from it. * * * By these incitements, he seems determined to quarter himself upon you for three weeks at least, if he can have your consent, or rather that of your lady, although I find he never had the honour to see her. He travels with two servants, and consequently three horses; but these latter are at hack, and the former at board-wages, so that neither of them will trouble you. As to the person himself, he every day drinks a pint of wine at noon, and another at night; and for the trouble he gives the house, he will allow one bottle more every day for the table; but not one drop for foreigners, who are to drink on your account."

Pending the answer to this, he rode to Howth Castle, and as he was getting on horseback he was seized with a severe fit of giddiness, which obliged him to lie down for two hours before he was able to proceed into town;—this prevented his visiting Wicklow, as he intended.

In March, 1735, writing to Alderman Barber, he thus describes his state:

"As to myself, I am grown leaner than you were when we parted last, and am never wholly free from giddiness and weakness, and sickness in my stomach, otherwise I should have been among you two or three years ago, but now I despair of that happiness. I ride a dozen miles as often as I can, and always walk the streets, except in the night, which my head will not suffer me to do. But my fortune is so sunk, that I cannot afford half the necessaries or conveniencies that I can

still make a shift to provide myself with here. My chief support is French wine, which, although not equal to your's, I drink a bottle to myself every day. I keep three horses, two men, and an old woman, in a large empty house, and dine half the week, like a king, by myself. * * You see by my many blottings and interlinings, what a condition my head is in." His writing at this time, apparently from his defect of vision, was greatly blotted, and very difficult to read. He fell off greatly in flesh during this year, and was, therefore, unable to ride any distance; he was also unable to attend church "for fear of being seized with a fit of giddiness in the midst of the service."

He designed to pass the winter of this year with his friend Sheridan, at Cavan, and set out upon the 3rd of November, but only reached as far as Dunshaughlin that night, from whence his journal to Mrs. Whiteway commences. He reached Cavan the fourth day, greatly fatigued, but apparently improved in spirits from the society of his old and dear friend. His leg, which had again ulcerated, prevented his taking his usual quantity of exercise, and made him exceedingly fretful and uneasy while he remained in Cavan. And Mrs. Whiteway, who seems to have been very much alarmed at his state at that time, writes to him: "I conjure you, dear Sir, not to trust any longer country helps; your appetite and your health is in the greatest danger by sitting so much as you must be obliged to do till it is well." His attendants in Cavan were an "apothecary and a barrack surgeon." His appetite continued good, and in the beginning of December the leg healed. He returned to Dublin before the end of the year.

The February of 1736 again saw the Dean laid up with a severe attack; and in April, by one of his letters to Pope, he acknowledges that his illness utterly disqualified him from any conversation. During the summer of this year he enjoyed but little comfort, his spirits and his flesh both wasted, till scarcely any of either remained, but he was still able to write to a few select friends.

It is remarkable that several of Swift's friends suffered from symptoms somewhat similar to his own. Thus Harley, Gay, Mrs. Barber, Pope, Mrs. Howard, Lady Germain, Arbuthnot, and others, all suffered from what is popularly termed a "fulness of blood to the head." And now

"Tie after tie was loosened from his heart;"

and, with the exception of Pope and Bolingbroke, all his early friends and acquaintances had been removed.

In November of the year 1736 Sheridan congratulates Mrs. Whiteway "upon the recovery of our dear friend, the Dean;" and we believe it was during this interval of ease that he commenced his last literary production, "The Legion Club," which, from a sudden attack, he was obliged to leave half finished.

We have already mentioned his great wasting and loss of flesh: the two following quotations upon this subject may, we think, be here inserted: "Among his singularities," says Dr. Hawkesworth, "were his resolution never to wear spectacles, and his obstinate perseverance in the use of too much exercise. His want of spectacles made it difficult to read, and his immoderate exercise wasted his flesh and produced a poorness in his blood, as he was often told by his friends and physicians." Again, the Dean writing to Pope, on the 2nd of December, 1736, says: "I have not been in a condition to write: years and infirmities have quite broke me; I mean that odious continual disorder in my head. I neither read nor write, nor remember, nor converse: all I have left is to walk and ride; the first I can do tolerably; but the latter, for want of good weather at this season, is seldom in my power; and having not an ounce of flesh about me, my skin comes off in ten miles riding, because my skin and bone cannot agree together. But I am angry because you will not suppose me as sick as I am, and write to me out of perfect charity, although I cannot answer."

Delany, in that most unworthy and unphilosophical attempt

to explain the so-called "decay in his understanding," when he says his *friend's*(?) "reason gradually subsided as his passions became predominant," thus remarks upon his state at this period of his life: "And to this end another cause also contributed; an obstinate resolution which he had taken never to wear spectacles,—a resolution which the natural make of his eyes (large and prominent) very ill qualified him to support. This made reading very difficult to him; and the difficulty naturally discouraged him from it, and gradually drew him, in a great measure, to decline it. And as he was now at a loss how to fill up that time which he was before wont to employ in reading, this drew him on to exercise more than he ought: for that he over-exercised himself is out of all doubt.

"His physicians and friends, Dr. Helsham and Dr. Grattan, frequently admonished him of his doing so; but he paid no sort of regard to their monitions.

"The truth is, his spirit was formed with a strong reluctance to submission of any kind; and he battled almost as much with the infirmities of old age as he did with the corruptions of the times. He walked erect; and the constant and free discharges by perspiration, from exercise, kept him clear of coughs and rheums, and other offensive infirmities of old age. But he carried this contention, as he was apt to do every other, too far.

"This incessant and intemperate exercise naturally wasted his flesh, and exhausted the oil of his blood; and his lamp of life was then in the condition of an ill-tempered candle, which frets and flames at once, and exhausts itself in proportion as it frets.

"He was himself very sensible of his condition, and takes notice of it in a letter to Dr. Sheridan, May 22, 1736. He tells him: 'Your loss of flesh is nothing, if it be made up with spirit. God help him who hath neither!—I mean myself. I believe I shall say with Horace, *Non omnis moriar* (I shall not all die), for half my body is already spent.'

"But although he was reduced to that emaciated condition, yet he had no more mercy on the half that remained than he before had for the half that was exhausted.

"The truth is, he was weary of life, and, therefore, under no solicitude to prolong it. Present health was his great concern, and he imagined, although erroneously, that his course of exercise contributed to it; and, in that persuasion, resolutely continued it."(*a*)

The poor Dean, it seems, though not "with spectacles on nose," had now fairly shifted

> "Into the lean and slippered pantaloon;
> His youthful hose, well saved, a world too wide
> For his shrunk shank; and his big, manly voice
> Turning again towards childish treble, pipes
> And whistles in its sound."

The vein of peevishness and discontent, partly mental, and partly owing to physical causes, and the ordinary and gradual decay to which flesh is heir,—yet aggravated, no doubt, by the loss of two of those most valuable senses by which man holds communication with external nature,—which we perceive in the latter years of Swift's correspondence, is not to be wondered at, although it has been endeavoured to be exaggerated into insanity by Orrery, Delany, Dr. Warton, and others.

In answer to a recommendation of Mr. Pulteney's on the subject of physicians, the Dean, in his answer of the 7th of March, 1737, writes: "I have esteemed many of them as learned and ingenious men: but I never received the least benefit from their advice or prescriptions. And poor Dr. Arbuthnot was the only man of the faculty who seemed to understand my case, but could not remedy it. But to conquer five physicians(*b*), all

(*a*) Observations upon Lord Orrery's Remarks, &c., by J. R. p. 100. This work, to which we shall again refer, is known to have been written by Dr. Delany.

(*b*) We know of at least eight medical men who attended Swift at different times, viz., Sir Patrick Dun, Drs. Arbuthnot, Radcliffe, Cockburn, Helsham, and Grattan, and Surgeons Nichols and Whiteway.

eminent in their way, was a victory that Alexander and Cæsar could never pretend to. I desire that my prescription of living may be published (which you design to follow), for the benefit of mankind; which, however, I do not value a rush, nor the animal itself, as it now acts; neither will I ever value myself as a Philanthropus, because it is now a creature (taking a vast majority) that I hate more than a toad, a viper, a wasp, a stork, a fox, or any other that you will please to add."

Writing to Alderman Barber, the end of March, this year, he says: "I am forced to tell you my health is much decayed; my deafness and giddiness more frequent; spirits I have none left; my memory is almost gone. The public corruptions in both kingdoms allow me no peace or quiet of mind. I sink every day, and am older by twenty years than many others of the same age." And to Sheridan, ten days later, after having recapitulated his various bodily infirmities and hourly apprehensions from his giddiness, which were almost enough of themselves to render him insane, he adds: "Besides I can hardly write ten lines without twenty blunders, as you will see by the number of scratchings and blots before this letter is done. Into the bargain I have not one rag of memory, and my friends have all forsaken me, except Mrs. Whiteway, who preserves some pity for my condition, and a few others, who love wine that costs them nothing."

Both Sheridan and Mr. Richardson strongly pressed him to visit them in the country, but his increasing decay of physical energy and mental spirit prevented his accepting either invitations. To the former he adds: "I have not an ounce of flesh or a dram of spirits left me; yet my greatest load is not my years but my infirmities. In England, before I was twenty, I got a cold which gave me a deafness that I could never clear myself of. Although it came but seldom, and lasted but a few days, yet my left ear has never been well since: but when the deafness comes on, I can hear with neither ear, except it be a woman with a treble, and a man with a counter-tenor. This

unqualifies me for any mixed conversation: and the fits of deafness increase; for I have now been troubled with it near seven weeks, and it is not yet lessened, which extremely adds to my mortification."

The same excuses were made to Pope in return for his invitations to Twickenham. Towards the middle of summer he recovered, however, somewhat, so that he was occasionally able to enjoy the conversation of his few remaining friends.

That Swift was not, however, at any time, even during the most violent attacks, at all insensible, or in any way deprived of his reasoning faculties, may be learned from the fact, that when Sergeant Bettesworth threatened his life, and "thirty of the nobility and gentry of the Liberty of St. Patrick's waited upon him," and presented him with an address, engaging to defend his person and fortune, &c., it is related by the most veritable of his biographers, that, "When this paper was delivered, Swift was in bed, giddy and deaf, having been some time before seized with one of his fits; but he dictated an answer in which there is all the dignity of habitual pre-eminence, and all the resignation of humble piety."

In January, 1738, in one of his letters to Alderman Barber, he writes: "I have, for almost three years past, been only the shadow of my former self, with years of sickness, and rage against all public proceedings, especially in this miserably oppressed country. I have entirely lost my memory, except when it is roused by perpetual subjects of vexation."

So desponding was the Dean at times, and so great was his fear of the loss either of his memory or his reason, that he used to say, on parting with an intimate friend in the evening: "Well, God bless you! Good night to you; but I hope I shall never see you again."—"In this manner," says Mr. Deane Swift, "he would frequently express the desire he had to get rid of the world, after a day spent in cheerfulness, without any provocation from anger, melancholy, or disappointment." Upon the occasion of a large pier-glass falling accidentally on the

very part of the room in which he had been standing a moment before, and being congratulated by a by-stander on his providential escape: "I am sorry for it," answered the Dean: "I wish the glass had fallen upon me!" Lord Orrery mentions that he had "often heard him lament the state of childhood and idiotism to which some of the greatest men of this nation were reduced before their death. He mentioned, as examples within his own time, the Duke of Marlborough and Lord Somers: and when he cited these melancholy instances, it was always with a heavy sigh, and with gestures that shewed great uneasiness, as if he felt an impulse of what was to happen to him before he died."

In the commencement of this article we stated that Swift was, in early life, a man of abstemious habits, and this we believe to be a fact. While he mixed in the free and exciting society of London life during his middle age, we observed that he occasionally committed excess in wine, which was forced upon him more by the society in which he moved than owing to any liking of his own. Of its injurious effects, however, he seemed perfectly conscious, and generally resorted to extreme abstemiousness when he had a return of his giddiness. It would appear, however, from his journal and his correspondence, that he had been recommended by his physicians, not only to drink some wine in an undiluted state after dinner, but also to take a little brandy or spirits in the morning, probably in accordance with the opinion which most of his medical men seem to have entertained, that his disorders chiefly proceeded from the state of his stomach. The diseases of the liver, the spleen, and the other viscera, have had their day, and we believe the stomach was the organ to which all our ills were referred about the beginning of the last century.

Notwithstanding that none of his biographers have alluded to the subject, nor have his greatest enemies ever been able to say that the Dean was once seen intoxicated, or in any wise affected with liquor, it is quite evident that he took more wine

and spirituous liquors in his latter life than his medical men would now have recommended him; but whether from liking, habit, the advice of his physicians and friends, or as a stimulant or resource in those hours of gloom or despondency to which he was then subject, it is now difficult to say. Writing to Miss Richardson, he alludes to the kindness of her uncle in the following terms: "Hearing that my ill stomach, and a giddiness I was subject to, forced me in some of those fits to take a spoonful of usquebagh, &c., he sent me a dozen bottles," &c.

All the worst symptoms enumerated in the foregoing recital continued without intermission during the year 1738, so that it was thought by his friends that he could not long survive. Yet, notwithstanding his many infirmities, that was the year in which he achieved most for humanity in this City, and arranged that his property should, after his death, be applied to the erection of the hospital that now bears his name.

At the conclusion of this year another friend and relative, Mr. Harrison, was removed from him. And his correspondence on this subject shows, that although bowed down by the weight of years and infirmity, his intellect was still as clear, and his affections warmer than is usual with persons at his time of life. His correspondence was now very limited, and his letters very short and concise, and chiefly to his intimate friends.

The winter of 1739 was remarkably severe, and the Dean felt it greatly. Lord Castledurrow endeavoured to carry him off to Delany's, but without effect; he remained chiefly wrapt up in his own gloomy meditations at home, unwilling even to see those who might minister to his comforts or enjoyments.

On the 29th of April, 1740, he writes to Mrs. Whiteway: "I find that you and I are fellow-sufferers almost equally in our health, although I am more than twenty years older. But I am and have been these two days in so miserable a way, and so cruelly tortured, that can hardly be conceived. The whole last night I was equally struck as if I had been in Phalaris's brazen bull, and roared as loud for eight or nine hours. I am at this

instant unable to move without excessive pain, although not one-thousand part of what I suffered all last night and this morning. This you will now style the gout. I continue still very deaf." Yet he was able to give a dinner party within a fortnight after, so changeable was his malady ; he used, however, to forget the names of his friends, even of those who visited him twice a week. We particularly mention this latter circumstance, because his subsequent increase of this defect has been enumerated by his biographers among the proofs of the insanity of a man past 73 !

As his memory decayed and his deafness increased, and, perhaps, we should add, his feelings and affections became blunted, his bodily health somewhat improved, a circumstance not uncommon in such cases; and in the summer of this year "his health," says Mrs. Whiteway, "is as good as can be expected, free from all the tortures of old age ; and his deafness, lately returned, is all the bodily uneasiness he has to complain of." And she adds, in her communication to Pope, from which we extracted the foregoing: "As I saw a letter of your's to him, wherein I had the honour to be named, I take the liberty to tell you (with grief of heart), his memory is so much impaired that in a few hours he forgot it ; nor is his judgment sound enough, had he many tracts by him, to finish or correct them, as you have desired." Still, we must confess, we cannot read *insanity* in even this. That the excessive pain of which he complained in the spring was attributed, at least by his friends, to an attack of gout, may be inferred from the following passage in Mr. Pulteney's letter of June 3rd: " I had, some time ago, a letter from Mr. Stopford, who told me that you enjoyed a better state of health last year than you had done for some time past. No one wishes you more sincerely than I do the continuance of it; and, since the gout has been your physic, I heartily hope you may have one good fit regularly every year, and all the rest of it perfect health and spirits."

His approaching sad condition may be learned from one of his notes at this time: "I have been very miserable all night, and to-day extremely deaf and full of pain. I am so stupid and confounded, that I cannot express the mortification I am under both in body and mind. All I can say is, that I am not in torture; but I daily and hourly expect it. Pray let me know how your health is and your family. I hardly understand one word I write. I am sure my days will be very few; few and miserable they must be. If I do not blunder, it is Saturday, July 26th, 1740. If I live till Monday I shall hope to see you, perhaps, for the last time."(*a*)

The last two documents in the Dean's hand-writing, and, probably, the last he ever penned, are his address to his Sub-Dean and Chapter on the subject of the choir, and a note to Mrs. Whiteway, concerning her health: the former dated the 28th and the latter the 13th of January, 1741. Occasional entries in his account books were, however, made as late as 1742.

We must now conclude the history of this memorable case from the information bequeathed to posterity by his friends; for we regret to add that his medical attendants have not left us any thing to quote from. Therefore the recitals of others, and the opinions of his non-medical biographers,—none of whom, with the exception of Orrery, Deane Swift, Delany, and Faulkner, ever saw him at this or any other period of his life,—and it appears that only one of these saw him during the last three years of his life,—must be received by the profession with caution, and be accurately collated with the foregoing history of his symptoms, in order to arrive at a just conclusion as to his precise condition.

In the year 1742, the Dean is said to have given way to an outburst of passion, and committed violence upon the person of one of his clergy, Mr. Wilson; but the opinion of those who lived at the time, and were cognizant of the facts, is con-

(*a*) To Mrs. Whiteway.

clusive to the contrary. From this period, however, may be dated his complete loss of memory, and inability of managing his own affairs, so that proper guardians(*a*) were obliged to be appointed to take care of him,—when

> " Last scene of all,
> That ends this strange, eventful history,"

we find him in

> " Second childishness and mere oblivion:
> Sans teeth, sans eyes, sans taste, sans everything."

This is at least the most that can be said of his " outrageous madness," " complete insanity," " dribbling fatuity," and " total imbecility," &c., as it has been termed by his biographers, and those who have attempted a description of his character. Faulkner says, that "in the beginning of the year 1741 his understanding was so much impaired, and his memory so much failed, that he was utterly incapable of conversation. Strangers were not permitted to approach him, and his friends found it necessary to have guardians appointed to take proper care of his person and estate. Early in the year 1742 his reason was wholly subverted, and became absolute lunacy." This account, and that in synonymous terms by Dr. Hawkesworth, who, be it remembered, never saw Swift, was chiefly derived from the information contained in the letters of Mrs. Whiteway and Deane Swift, Esq., published by Lord Orrery a few years after the Dean of St. Patrick's death; both of which very much exaggerate the account of the poor Dean's state at this time, as is shewn by the manuscript notes appended to a copy of Hawkesworth's work by Dr. Lyon, who was the principal guardian of Swift at this time, and who must have enjoyed constant opportunities of seeing him.

As, however, the most complete, and, indeed, the only

(*a*) Dr. King was one of those named in the commission; but the care of the Dean was chiefly confined to the Rev. D. Lyon. Is the legal document of this commission still in existence; and on what account was it granted?

authentic account of the last few years of the Dean's life, and that from which all the biographers have gleaned their information, is contained in the two letters just alluded to, we here make a few extracts from them bearing upon the subject. Mrs. Whiteway's letter is dated November 22, 1742: "I told you, in my last letter, the Dean's understanding was quite gone, and I feared the farther particulars would only shock the tenderness of your nature, and the melancholy scene make your heart ache, as it has often done mine. I was the last person whom he knew; and when that part of his memory failed, he was so outrageous at seeing anybody that I was forced to leave him; nor could he rest for a night or two after seeing any person, so that all the attendance which I could pay him was calling twice a week to inquire after his health, and to observe that proper care was taken of him, and durst only look at him while his back was towards me, fearing to discompose him. He walked ten hours a day; would not eat or drink if his servant stayed in the room. His meat was served up ready cut, and sometimes it would lie an hour on the table before he would touch it, and then eat it walking." As the following account of his ophthalmic affection is the only one which is given from an authentic witness, and as it is somewhat fuller than that copied by Dr. Mackenzie from the work attributed by Scott to Delany, which, by the way, appears to have merely paraphrased Mrs. Whiteway's letter,—we here insert it as it was originally published by Lord Orrery in 1750: "About six weeks ago, in one night's time, his left eye swelled as large as an egg, and the lid Mr. Nichols (his surgeon) thought would mortify, and many large boils appeared upon his arms and body. The torture he was in is not to be described. Five persons could scarce hold him, for a week, from tearing out his own eyes; and for near a month he did not sleep two hours in twenty-four. Yet a moderate appetite continued; and, what is more to be wondered at, the last day of his illness he knew me perfectly well, took me by the hand, called me by my

name, and shewed the same pleasure as usual in seeing me. I asked him if he would give me a dinner? He said: 'To be sure, my old friend.' Thus he continued that day, and knew the doctor and surgeon, and all his family, so well, that Mr. Nichols thought it possible he might return to a share of understanding, so as to be able to call for what he wanted, and to bear some of his old friends, to amuse him. But, alas! this pleasure to me was but of short duration; for the next day or two it was all over, and proved to be only pain that had roused him. He is now free from torture, his eye almost well, very quiet, and begins to sleep, but cannot, without great difficulty, be prevailed on to walk a turn about his room; and yet, in this way, the physicians think, he may hold out for some time."

We have quoted this letter at length, not only on account of its authenticity, and the greater credit in every way to be attached to it, but because it is undoubtedly from this document *alone*, which they have quoted *almost verbatim*, that all the biographers of Swift, from Faulkner, Delany, and Hawkesworth, down to the present time, have derived their information. And upon this conjecture of Mrs. Whiteway's, as to the effect of pain in awakening his dormant faculties and restoring his reason, Hawkesworth and Orrery have thought fit to ground some most erroneous notions with regard to the effects of pain upon insanity.

During the following year we really have no authentic account whatever of the Dean's state transmitted to us by any of the persons then about him; and, unfortunately, none of his medical attendants have in any way described it. Delany, and after him Faulkner and Hawkesworth, but we are not quite sure which first, give the following account of this year, 1743: it is, however, of little consequence to which the priority belongs, as the passage in the work of the former of these differs from that in the latter only in the transposition of one word, and the alteration of the tense of another. "After the Dean had continued silent a whole year, in this helpless state

of idiotcy, his housekeeper went into his room on the 30th November, in the morning, telling him that it was his birth-day, and that bonfires and illuminations were preparing to celebrate it as usual. To this he immediately replied : 'It is all folly ! they had better let it alone.'" That his silence was not, however, the sullenness of insanity, may be learned from the following account, said to have been given by Delany : "He would often *attempt* to speak his mind, but could not recollect words to express his meaning ; upon which he would shrug up his shoulders, shake his head, and sigh heartily." In this very remarkable passage, which details anything but a state of insanity, we have, perhaps, the true account of Swift's actual condition. That he had not lost the sense of smell may be presumed from the fact that a little girl having blown out a candle in his chamber, the smell of which always offended him, he appeared very angry, and said: "You are a dirty little slut!" Both Faulkner's and Hawkesworth's accounts contain the following incongruous passage, in allusion to this circumstance : "Some other instances of short intervals of sensibility and reason, after his madness, seemed to prove that his disorder, whatever it was, had not destroyed, but only suspended, the powers of his mind."

Lord Orrery, having heard of several expressions which he is said to have uttered with reference to himself, such as, "Oh, poor old man!" on seeing his face in a glass, &c., wrote to Mr. Deane Swift to inquire into the actual state of his illustrious relative, and received a letter in reply, dated 4th April, 1744, which, as it is the only authority for all the lengthened description of his biographers, we here insert, as it was first published in London, in 1751 :

"As to the story of O poor old man! I inquired into it. The Dean did say something upon his seeing himself in the glass, but neither Mrs. Ridgeway nor the lower servants could tell me what it was he said. I desired them to recollect it by the time when I should come again to the Deanery. I have been there since, they cannot recollect it. *A thousand stories*

have been invented of him within these two years, and imposed upon the world. I thought this might have been one of them; and yet I am now inclined to think there may be some truth in it; for, on Sunday the 17th of March, as he sat in his chair, upon the housekeeper's removing a knife from him as he was going to catch at it, he shrugged his shoulders, and, rocking himself, he said: 'I am what I am, I am what I am,' and, about six minutes afterwards, repeated the same words two or three times over.

"His servant shaves his cheeks and all his face, as low as the tip of his chin; once a week, but under the chin and about the throat when the hair grows long it is cut with scissars.

"Sometimes he will not utter a syllable, at other times he will speak incoherent words; *but he never yet, as far as I could hear, talked nonsense, or said a foolish thing.*

"About four months ago he gave me great trouble: he seemed to have a mind to talk to me. In order to try what he would say, I told him I came to dine with him, and immediately his housekeeper, Mrs. Ridgeway, said, 'Won't you give Mr. Swift a glass of wine, Sir?' he shrugged his shoulders, just as he used to do when he had a mind that a friend should not spend the evening with him. Shrugging his shoulders, your Lordship may remember, was as much as to say, 'you'll ruin me in wine.' I own I was scarce able to bear the sight. Soon after he again *endeavoured, with a good deal of pain, to find words to speak to me;* at last, not being able after many efforts, he gave a heavy sigh, and, I think, was afterwards silent. This puts me in mind of what he said about five days ago. He endeavoured several times to speak to his servant (now and then he calls him by his name); at last, not finding words to express what he would be at, after some uneasiness, he said, 'I am a fool.' Not long ago the servant took up his watch that lay upon the table to see what o'clock it was; he said, 'bring it here,' and, when it was brought, he looked very attentively at it. Some time ago the servant was breaking a large stubborn coal, he said, 'that's a stone, you blockhead.'

"In a few days, or some very short time after guardians had been appointed for him, I went into his dining-room, where he was walking; I said something to him very insignificant, I know not what, but, instead of making any kind of answer to it, he said, 'go, go,' pointing with his hand to the door, and immediately afterwards, raising his hand to his head, he said, 'my best understanding,' and so broke off abruptly, and walked away." Now these two letters are really, after all, the only account of the last three years of Swift's life that has come down to us.

From this period, it is said,—but not, it must be remembered, by any person who saw him,—that he remained perfectly silent till his death, which occurred at three o'clock in the afternoon, upon Saturday, the 19th of October, 1745, in the seventy-eighth year of his age. With regard to the manner of his death, two very opposite accounts have been published. Lord Orrery says, it "was easy, without the least pang or convulsion. Even the rattling in his throat was scarce sufficient to give any alarm to his attendants, till within some very little time before he expired." This has been copied almost *verbatim* by Delany and Hawkesworth; but Faulkner, the only one of the four who was in Dublin at the time, says, he "died in very great agony, having been in strong convulsive fits for thirty-six hours before." Both accounts are probable. From the following circumstance we are, however, inclined to think that his death was not quite undisturbed. Mr. Samuel Croker King, one of the first surgeons in Dublin toward the end of the last century, was the apprentice of Mr. Nichols, the Surgeon-General, who, with Dr. Grattan, was Swift's attendant at the time of his death; and Mr. King's son informs us that his father was dining with his master, when he was suddenly sent for to see the Dean, who was taken very ill, the night before his death.

A *post mortem* examination was made by Mr. Whiteway, his relative, but all we are able to learn is, "that he opened the skull, and found much water in the brain."(*a*) Dr. Lyon,

(*a*) Works of Swift, vol. ii. p. 261. Dublin: Faulkner, 1763.

revising this work, has altered the expression to "the sinus of his brain being loaded with water." What other pathological appearances presented at the autopsy it is now difficult to say. Thus past from amongst us the greatest genius of his age, and one of the brightest ornaments of our country.

The Rev. David Stevens, one of the Dean's Chapter, had, it is related, several times expressed a desire to his friends and physicians, that the Dean should be trepanned, from an opinion which he entertained that he laboured under water on the brain; and to a certain degree his diagnosis proved correct.

Faulkner's Dublin Journal, for Tuesday, 22nd October, 1745, thus records the Dean's decease:

"Last Saturday, at three o'clock in the afternoon, died that great and eminent patriot, the Rev. Dr. Jonathan Swift, Dean of St. Patrick's, Dublin, in the seventy-eighth year of his age; who was born in the parish of St. Werburgh's, Dublin, the 30th of November, 1667, at his uncle, Counsellor Godwin Swift's house, in Hoey's Alley, which in those times was the general residence of the chief lawyers. His genius, works, learning, and charity are so universally admired, that for a newswriter to attempt his character would be the highest presumption; yet as the printer hereof is proud to acknowledge his infinite obligations to that prodigy of wit, he can only lament that he is by no means equal to so bold an undertaking."

The Dublin Courant, published the Wednesday after the Dean's death, contains the following passage: "For some years past he has been entirely deprived of memory, and by degrees fell into a perfect insensibility."

Finding that this paper has already very much exceeded the limits to which we originally supposed it would extend, we think it better to take advantage of the natural division of the subject that here presents, and continue it in our next Number.

PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Guy's Hospital Reports. Edited by George Hilaro Barlow, M. D., Edward Cock, Edmund L. Birkett, M. B., and Alfred Poland. Second Series. Vol. IV. London, Highley. 1846. pp. 498.

The contents of this volume, though of a varied character, are, in general, creditable to the authors; and the names of Addison, Thomas Williams, Hughes, and Alfred Taylor, are sufficiently known to command respect for any work to which they may be attached.

This volume, the fourth of the new series, contains papers on Practical Medicine, Physiology, and Medical Jurisprudence, besides three important clinical reports by Messrs. Poland and Lever, and Dr. Bentley.

The first paper on the list demands our special attention, not only from the respect due to the name of its author, but from the importance of the subject to which it is devoted. It treats of "The Difficulties and Fallacies attending physical Diagnosis in Diseases of the Chest;" and though in the remarks which we mean to offer on this paper of Dr. Addison's we shall be obliged not only to differ widely with him on many points, but to express a strong opinion as to the injury he has done to the character of British medicine by his mode of handling the subject, we give him the credit which is due to an author who has the boldness to point out those parts of a science which, in his opinion, are still obscure or deficient. It would be well indeed if, in medicine, more men could be found who, after the attainment of a large stock of practical knowledge, would content themselves rather with pointing out what was wanting to complete the subject, than dilating on its perfectness, or their success in the employment of means, the exact value of which is still to be determined. Men of the

latter class are advocates, not inquirers, and Dr. Addison cannot be ranked among them.

Dr. Addison is a physician of deserved eminence. He has been long engaged in extending the usefulness of practical medicine; and his previous contributions, and the position he holds as physician to one of the great metropolitan hospitals, give an importance to every thing which comes from his pen. It is with no desire of conveying unnecessary compliment to Dr. Addison that we make these remarks, but to assure our readers that this paper emanates from no self-educated professor in an infant school of medicine, but lately sprung up in some remote quarter of the globe, an opinion very likely to be formed if the title was not consulted. The paper is from London; it has hence a twofold interest, not only as conveying the opinions of the author, but as giving some new ideas as to the state of medicine in the metropolis. The published works, however, of so many excellent observers, will vindicate the English school of medicine from the charge of advocating error in any form.

In this year of 1847, the author, manifestly anxious to teach right principles and correct error, formally announces the doctrine that all attempts at diagnosis founded on the observation of physical signs alone must result in failure; and that, to arrive at a right view of any case we must study the vital in connexion with the physical phenomena.

Now, however we may object to Dr. Addison's manner or matter, it is clear that he has taken a safe position, as the advocate of a doctrine which no practical man dreams of denying, and which, for the last quarter of a century, has been insisted on by every writer of authority in Great Britain, Ireland, France, Germany, and America.

The following observations, though containing much of what is true, yet betray carelessness or forgetfulness. They would be useful to ignorant or presuming practitioners, or a badly educated class of students: but, as addressed to the profession of England, we declare them to be superfluous, to use no harsher term:

"Books and essays without number, and of great value, have been written for the purpose of adding favourable testimony to the merits of the stethoscope; to increase its utility, and extend its application; whereas, so far as I know, not a single individual has deemed it right, or desirable, to pursue the opposite course, of expressly publishing to the world, the manifold difficulties and fallacies attending its use. The publications alluded to, by the semblance of a too exclusive advocacy, have, according to my humble belief, placed the stethoscope and its preten-

sions in a false position; they have awakened in the minds of many a vague notion of infallibility; they have led the profession and the public to expect too much; and, by suppressing or concealing the real imperfections of a favourite expedient, have put it in the power of hostile parties to inculpate the stethoscope for the errors of the stethoscopist. But if the works of even able and experienced writers have thus done injury to the cause of physical diagnosis, and have furnished weapons of attack to its opponents; what shall we say of that very numerous class of persons, who, with the most slender experience, mistake zeal for proficiency, and are perpetually falling into grievous and palpable error? The enthusiasm, the rashness, the bigotry and conceit of the too exclusive stethoscopists have indeed most seriously retarded the adoption, and vitiated the claims of physical diagnosis; and have done more to discourage the student, to shake the confidence of the profession, and to throw ridicule upon the stethoscope itself, than the most inveterate hostility could ever have accomplished. They seem to look upon the instrument as all-sufficient; they rush at once to auscultation and percussion; they neglect or disdain to make those careful and minute inquiries, which no sound and sensible physician ever fails to do; and thereby convert a valuable auxiliary, into what, in their hands at least, proves but an imperfect and treacherous substitute. Unfortunately, in the medical profession, all truly valuable and practical knowledge, is only to be attained by a proportionate sacrifice of time and labour; and, as a general rule, the one may very fairly be measured by the other. Physical diagnosis is signally obedient to this law; a perfect mastery over it would indeed be an inestimable acquisition, but its accomplishment can scarcely be numbered with the possible. The truth is, even moderate proficiency in the use of the stethoscope is much more rarely achieved, than many are willing to admit; and I venture to affirm, that the student, who shall attempt to acquire such proficiency from a perusal of books, and by an attendance upon patients in the wards of even this large hospital, will, if he rely solely upon his own individual efforts, unaided by an experienced guide, most certainly and most miserably fail in his object. His attempts will prove but a profitless expenditure of valuable time; he will only be storing his mind with false knowledge; and, in the end, will assuredly reap for his reward disappointment, mortification, and loss of professional fame. The very language of physical diagnosis must prove, in a great measure, unintelligible to him; and it would be almost as unreasonable to expect, that a man born blind, should, on receiving his sight, be able at once to recognise, and accurately distinguish, the ever-varying tints of a landscape; as to suppose that a novice in the art of physical diagnosis, could, without the aid of an interpreter, uniformly attach a correct idea to every term employed to express the ever-varying phenomena elicited by auscultation and percussion. It may indeed be alleged, that the example of Laennec himself presents us with unquestionable proof how much may be accomplished by the unaided exertions of an individual. This is undoubtedly true; but the fine genius, the indefatigable industry, and vast opportu-

nities of Laennec do not fall to the lot of many; and his case can only be regarded as a very rare exception to a very general rule. Laennec not only gave existence, but a language to the art. Scarcely more hopeful is the case of the practitioner who, having unfortunately neglected the cultivation of physical diagnosis during his pupilage, has already entered upon the duties of his profession. Driven by necessity or pride, to rely upon his own resources, he will, even with all the advantages of a large hospital, seldom be successful; and if without the benefit of such opportunities as a large hospital affords, he would probably be exercising a sound discretion, were he to repudiate the practice altogether; or, at most, make it entirely subservient to other means of diagnosis.

"Such sentiments, proceeding from an hospital physician, may by some be pronounced to be vain and presumptuous. Nevertheless, my conscience tells me, that, in the present instance, plain speaking, if not the most prudent, is certainly the most honest policy. To strip the stethoscope of the extravagant and meretricious pretensions thrust upon it by injudicious friends, to make a candid acknowledgment of the manifold difficulties and fallacies to be encountered in its employment; to state fairly what it will not, as well as what it will do, is surely calculated to render it some service: for by so doing, we disarm hostility, and establish on a solid foundation its legitimate claims to the respect and confidence of the profession. If, notwithstanding this explanation, my sentiments shall be deemed an offence; it is to be hoped that the confessions, which are to follow, will go some way towards its excuse: neither will it be taxing generosity too much, to claim an acquittal from all empyrical motives, if I venture to declare, what is well known to many members of this Society, that these confessions are made by one, who has zealously cultivated the practice of auscultation and percussion, at this large hospital, and elsewhere, for a quarter of a century."

In reading these passages we confess to some feelings of doubt creeping over us, as to the lapse of time, for between Laennec and Addison there appears not one who ever insisted on the connexion of signs and symptoms. Were we, we asked ourselves, really under a mistake, and in our reckoning not less than twenty-five years astray. Did not Andral study diagnosis philosophically? Did Louis thrust extravagant and meretricious pretensions upon the stethoscope? And were there not friends nearer home, too,—Forbes, and Hope, Williams, Latham, Watson, and Spittal; and in Ireland, Graves, Stokes, Corrigan, Law, and Greene, who taught the necessary connexion of vital and physical phenomena? Were these all beings of the crazed imagination:

> "As Stephen Sly and old John Naps of Greece,
> And Peter Turf, and Henry Pimpernell,
> And twenty more such names and men as these,
> Which never were, nor no man ever saw."

But it is no dream. These men lived and laboured, and many still remain, ardent workers in medicine, though unhonoured in the pages of our author. And we appeal to their writings to shew, that both directly and indirectly, every one of them, without even the exception of Dr. Hope, has insisted on the doctrine for which our author claims merit. We challenge him to produce a single writer of authority who has put forward the stethoscope as an all-sufficient means of diagnosis. But "error," to use the words of Curran, "is, in its nature, flippant and compendious; it hops with airy and fastidious levity over facts and arguments, and perches on assertion which it calls conclusion."

In truth the doctrine of the sufficiency of physical signs was never taught in these countries; never advocated by any standard author. It is true that the lamented Dr. Hope attempted to establish the diagnosis of valvular disease on the acoustic phenomena, but it would be unjust to the memory of that distinguished man to declare that he discarded the symptoms and history of the case. His great work on Diseases of the Heart is a monograph relating to the physical phenomena of the heart's action, an attempt to describe them, analyze them, and determine their value. But every one who has studied his varied and rich contributions to medicine, must admit that there are few who have added more to our knowledge of the symptoms of cardiac disease; and sure we are, from our knowledge of the man, that, had he lived but a few years more, he would have modified his opinions as to the actual value of physical signs in diseases of the heart. To this subject we shall return.

But let us come to evidence, and commence with Dr. Forbes. In the preface to the second edition of his translation of the work of Laennec he says:

"It must not be supposed, from anything I have stated, that I am inclined to consider the methods of diagnosis, discovered by Avenbrugger and Laennec, as all in all,—as not only unerring in their nature but also sufficient for practical purposes, without any aid from the common and general symptoms of diseases. So far is this from being the case, that I deem it necessary to state in this place, what I have substantially declared in several of the notes appended to the work, that such a doctrine is both false and dangerous."

This was written twenty years ago, and in every subsequent production of this distinguished physician he has adhered to and advocated the same doctrine.

Dr. Hope observes :

" With respect to the comparative value of the general and physical signs of disease of the heart, it may be said that Laennec rather undervalued the former and underrated the latter. This was owing principally to the general signs being less perfectly understood when he studied than they have subsequently become, in consequence of being studied with the aid of auscultation. The ardour of his early disciples, who imagined that the physical rendered the general signs superfluous, brought auscultation into some disrepute by the inaccuracy of their diagnosis. But since the stethoscope has taken its proper place as an auxiliary only, and the diagnosis has been founded on the two classes of signs conjointly, auscultation has ranked as a discovery which will immortalize its author, and form an epoch in the history of medicine."

In further vindication of Dr. Hope we may refer to his synopsis of the symptoms of pericarditis and of aneurism.

Let us now quote from Dr. Stokes:

" It is never to be forgotten that although in these various classes we have a vast number of well-marked and essentially differing physical phenomena, there is not one of them which, taken singly, can be considered as a pathognomic sign. Nay, we might go further, and declare that no possible combination of them can be considered absolutely pathognomic. It is only, as we have said before, by the connexion of the accurately ascertained physical signs with the previous history and actual symptoms of the case, that a correct diagnosis can be ever arrived at."

Again :

" It is plain that the study of symptoms alone cannot lead to the accurate distinction of chest disease. The same remark is applicable to physical signs unconnected with symptoms."

" It cannot be too often repeated," says the same author, " that physical signs only reveal mechanical conditions, which may proceed from the most different causes, and the latter are to be determined by a process of reasoning on their connexion and succession; their relation to time, and their association with symptoms. It is in this that the medical mind is seen."

Let us hear Dr. Latham :

" And if, what is most important of all, I aim at a diagnosis of the endocardial disease, in respect of its essence and nature; then, to the mere sound, and its time, and its place, and its direction, I must add a reckoning of the actions and sufferings of the constitution at large, which preceded and attend upon it. These, which are the highest considerations of all, are reserved for their proper place."

Raciborski repeats the same doctrine :

"The greatest error which has been committed with regard to auscultation is, that some attach too great importance to it, and esteem it, as it were, a science of sounds, each of which must indicate a different disease."

And again :

"There is no *rale* which has a determinate and invariable value; so that, the sign being given, it is almost impossible to tell from it alone the name of the disease to which it belongs."

There are two works, which, appearing almost contemporaneously, may be taken as exponents of the state of opinion on these points in Great Britain and Ireland : one, the production of many eminent men, the other, the herculean labour of an individual. We allude to the Cyclopædia of Practical Medicine, edited by Drs. Forbes, Tweedie, and Conolly, and to Dr. Copland's Dictionary of Medicine. Both may be referred to, to shew that the principles which Dr. Addison controverts were never taught in the standard works and monographs of this country.

Were it necessary to insist further on these points, we might quote from the writings of Graves, Sir J. Clark, Elliotson, Williams, Watson, and others, to say nothing of Continental and American authorities, to shew that the doctrine of the sufficiency of physical signs, which Dr. Addison has contended against, has never been taught by any writer of character, nor held by any well-educated medical man in this or other countries. The author has fallen into the common error of running a tilt against a man of straw ; yet while we give him credit for a vigorous assault, we cannot allow him complete success. He has, in truth, injured the cause of accurate diagnosis and the character of British medicine by presenting them in a position greatly inferior to that which they deservedly hold.

Before analyzing Dr. Addison's propositions, we cannot help observing on the want of arrangement, or natural sequence of the aphorisms, as well as on the frequent fault of announcing the most ordinary facts in clinical medicine with the formality of a novel proposition.

The first four propositions are devoted to express the difficulty which arises in physical diagnosis from the inefficient performance of the respiratory act. The author specifies nervousness, an error in the mode of accomplishing this act, deformity of the chest, and ossification of the costal cartilages, as

sources of error. If a man does not breathe, we shall hear no respiratory murmur; if deformity of the chest exists, it is clear that it will influence the results of percussion ;—a slight curvature of the spine, or want of symmetry in the clavicles, will cause a dulness not attributable to disease of the lung. But these facts are well known, and, with many others bearing on the same point, have been long ago elucidated by Woillez, in his work on deformities of the chest.

We cannot yet explain why the chests of many individuals differ so much in sonoriety ; but that the dulness in old persons is to be referred, as Dr. Addison believes, to ossification of the cartilages, we more than doubt. We find a naturally dull chest in many young and middle-aged persons ; and, on the other hand, we commonly find remarkable clearness in individuals of great age : and we are disposed to agree with Dr. Williams, that, exclusive of the actual quantity of air within the chest, the sound on percussion depends mainly on the amount of thoracic tension.

In his fifth and sixth propositions the author thus expresses himself :

> " When exploring the chest in a case of recent disease we may be misled by the permanent effect of an ancient pleurisy.
>
> " When, as usually happens, rickety deformity consists in lateral flattening of the ribs, with projection of the sternum, the action of the heart is liable from slight causes to beat with such violence, and to have its sound and impulse so extensively diffused, as not unfrequently to have led to an unfounded apprehension of serious organic disease of that organ."

These propositions only go to prove that an ignorant man will probably make an erroneous diagnosis. That such men do exist we are far from denying ; but when the author puts these facts forward as shewing the fallacies of physical diagnosis, he should have stated that the original observers of the phenomena never taught that they were to be considered independently of other circumstances.

It is true that the effects of a former pleurisy might mislead a superficial observer, and one ignorant of pathology, in a case of recent disease. It is true that in flattening of the ribs on the left side, the apparently increased action of the heart might lead a similar individual to the belief that hypertrophy existed. But what does this amount to? Nothing,—but that which is everywhere admitted, that in determining the value of any sign we must depend not only on its amount and character, but on many other circumstances,—the accompanying

physical signs, the existing vital phenomena, and the history of the case. These instances are no examples of the fallacies of physical diagnosis, and in such, if error result, it only shews that the observer did not know his business.

Most of Dr. Addison's propositions are of this kind. They are attempts to establish what nobody doubts, that diagnosis, founded on the observation of certain physical signs, must be often erroneous.

The next four propositions relate to various conditions, such as rickety deformity, distension of the abdomen, and bronchitic complication, as sources of difficulties and fallacies. The author states that, under these circumstances, the too exclusive stethoscopist is liable to be beaten in diagnosis by those who reject physical examination altogether. Of such trials of skill, with imperfect weapons on both sides, we know nothing in the Dublin schools; but we can assure the author that the lists of probable failures under such circumstances might be easily augmented.

After stating that bronchitis is the most prolific source of mistakes and oversights in physical diagnosis of diseases of the lungs, the author goes on to his tenth proposition:

"When the bronchitic complication in phthisis is considerable, we often fail to detect some or all of the ordinary physical signs of the latter. Dulness on percussion, tubular respiration, and even bronchophony or pectoriloquism. This is more especially the case, however, in the earlier stages of phthisis, the difficulty being then increased by the absence of any flattening or immobility of the ribs of the side affected."

The difficulties and fallacies encountered by our author seem to have followed him in the composition of this somewhat obscure proposition. It is no new observation that an intense and general bronchitis may render the diagnosis of tubercle difficult, but that it often does so in advanced cases we confidently deny. And we would refer to the researches of Louis and of Stokes on acute tuberculization of the lung, to shew that, even pending the most intense and universal bronchitis, the diagnosis of tubercle has been successfully made, although there was no partial consolidation of the lung, and that comparison of one portion with another gave no difference of result. We have seen this diagnosis successfully made during the maculated stage of typhus, by successive observations detecting a progressive and general dulness pending the existence of bronchitic rales alone. It is further to be observed, that flattening of the chest is by no means peculiar to the advanced stage of phthisis, or even constant in that affection; and as to

the immobility of the ribs on the affected side, we can only recommend the author to make some new observations on the point. It is one of the rarest phenomena in phthisis.

Why the following proposition should be placed as illustrative of the difficulties and fallacies attending physical diagnosis we are at a loss to understand:

"A person may have a violent tearing cough, lasting for weeks or months, attended with slight mucous expectoration, occasionally even streaked with blood, and causing pain to be felt through the whole chest; as well as an appearance of general constitutional distress, whilst neither auscultation nor percussion can detect any morbid change within the chest."

All this, according to the author, may result from a relaxed uvula or hysterical irritation, an opinion which Dr. Addison will find very few to contravene: but this is no case against physical diagnosis. There is certainly a difficulty in discovering what does not exist; but, the lungs being healthy, we cannot see how the charge of fallacy can apply to either auscultation or percussion. We admit the difficulty, and fear it is insurmountable, but the charge of fallacy is manifestly untenable.

But we are told that the same circumstances may occur with miliary tubercles, antecedent to phthisical disorganization. We wish the author had adduced some facts in support of the opinion that a violent cough, lasting for months, with pain, hæmoptysis, and constitutional distress, may depend upon miliary tubercles incompetent to give physical signs. Loose statements of this kind are much to be objected to, and are behind the actual state of medicine, as well as such expressions as "miliary tubercles, antecedent to phthisical disorganization," a condition difficult to be comprehended. If the tubercles be in the lung, they must disorganize the lung; if this be not phthisical disorganization, it is tubercular disorganization; the distinction is Dr. Addison's, and we know of no stethoscopist who has ventured on such refinement.

Let us next refer to the twenty-fourth proposition:

"We may be called to a case of pleurisy before a single physical sign has been developed."

It is hard to say whether this is intended to illustrate a difficulty or a fallacy. If it is a difficulty, it is similar to that mentioned in the former proposition, a difficulty of finding what does not exist: if there be no effusion, if it has not yet occurred, there will be none of the usual physical signs. But where

is the fallacy? Auscultation and percussion give results which are true, and shew that effusion has not yet occurred. If the observer from this was at once to conclude that the case was not pleurisy, he would shew ignorance, and might be mistaken. But why put forward this proposition at all? Is not the fact that in any suspicious case effusion has not yet occurred, one of great,—the greatest practical value. Unfortunately, the physician is seldom called in in time to avail himself of it; but every practical man knows that in the great majority of cases, pleurisy can be detected by its physical signs at a period sufficiently early to establish its diagnosis, and lead to prompt and successful treatment.

To bring a charge against any comprehensive system of diagnosis, and to support that charge by referring to its partial application, is unfair, and therefore un-English. Every man has the right to discuss the question of the applicability of physical diagnosis, and to hold whatever opinion he may think justifiable on the subject; but let him not deal with a fragment of the science as if it were the entire. Let him not place physical diagnosis on his title-page, and only use such parts of it as may justify him in his argument. Dr. Addison gives three propositions, declaring that auscultation and percussion alone will not suffice to distinguish malignant disease, hydatids, or a tumour, from ordinary disease of the lung; that the existence of simple tubercles cannot be determined by physical means; and that auscultation alone cannot distinguish the murmur of organic from that of functional disease of the heart. See his seventeenth, twenty-third, and thirty-eighth propositions.

Now what "able and experienced writer" ever said the contrary? Has Graves, Stokes, Hughes, Walshe, or Haugstedt, taught such a doctrine with respect to cancer? Who has maintained that auscultation and percussion could with certainty detect simple tubercles? As to the sounds of the heart, we suppose that the author alludes to the opinions of Hope; yet Dr. Hope did not found his differential diagnosis on the actual character of the sound, but rather on its relation to other physical signs.

It is plain that these propositions are of no avail against physical diagnosis, because they do not deal with it as a whole. There are, even if we adopt the common ideas on the subject, many other means of physical diagnosis besides auscultation and percussion; and in an argument seeking to prove its fallacy, all its means should, in fairness, have been discussed. To this point we shall return.

When an author puts forward a series of formal propositions, mentioning certain facts in clinical medicine, the facts will pass for his own, even though he does not state that he is the discoverer of them. If there is no reference to any other source, the conclusion is natural that the proposition has been formed from facts observed by him. But the case becomes stronger when he announces that he has observed these facts, and claims credit for them. Yet if it appears that the observations thus indirectly and directly claimed by an author are not his own, instead of being hailed as the originator of the discovery, he becomes in the end the sufferer from his temerity.

Let us refer to the twelfth, thirteenth, and fourteenth propositions, which announce that laryngeal obstruction and aphonia render the results of auscultation doubtful or deceptive, and that bronchial obstruction may for a time obscure the signs of a cavity. These facts were observed long ago, accurately recorded in various works, and are familiar to every well educated physician. If a patient is aphonious, we cannot obtain pectoriloquism ; if his larynx is so narrowed as to produce stridulous breathing, the vesicular murmur and rales are diminished or wanting ; but there is no fallacy here,—no ground of charge against physical diagnosis. Even if the symptoms and history of the case were excluded, there are other means of diagnosis than auscultation ; and we might as well expatiate on the fallacies of the physical diagnosis of stone in the bladder, because, in certain cases, we fail in striking the calculus with the sound.

In the sixteenth proposition we read that—

"When any form of chronic induration of the pulmonary tissue exists, and especially if attended with dilated bronchial tubes, neither auscultation nor percussion enable us to distinguish such a condition of lung from phthisical disease. If bronchitis be present, and the induration be situated at the apex, the signs are perfectly identical with phthisical disorganization."

That this proposition is in the main true, and that it is one of great importance, must be admitted : but the facts embodied in it have been long and well known ; and as an illustration of the difficulties of physical diagnosis it is unfair, for the whole group of signs is not given. Laennec described the dilatation of the tubes, and Louis dwells on the difficulties of the diagnosis. Dr. Corrigan, in his valuable memoir on cirrhosis of the lung, has announced all the facts contained in the proposition, and thrown a new light on the pathology, progress, and diagnosis of dilated tubes; and further, has dwelt on phy-

sical signs which Dr. Addison passes over in silence. But he has done more. The rules which Dr. Addison gives to distinguish the disease from phthisis, are Dr. Corrigan's ; the observations on the history and progress of the affection are Dr. Corrigan's ; and the rule of incongruity between the local signs and general condition of the patient is his also. There is, with one exception, nothing in the proposition or commentary which was not published by Dr. Corrigan nine years ago. The exception is the doctrine, that dilated bronchial tubes may exist without bronchitis, which, we might conclude, was the author's opinion, from comparing the first and second parts of the aphorism ;—this has at least the merit of novelty.

We will next refer to the eleventh proposition, as it relates to the subject under consideration :

"When, with bronchitic rales, the stethoscopist detects some dulness of sound on percussion, tubular respiration, bronchophony, pectoriloquy, and gurgling, it still is not conclusive evidence of phthisis, as the whole of these signs may result from the permanent changes produced by a former pleurisy, pleuro-pneumonia, or hooping-cough, or even from a recent pleurisy or pneumonia, when these several conditions happen to be associated with considerable bronchitis."

The physical signs here mentioned are sufficiently conclusive evidence of cavities, and the diagnosis will lie between tuberculous ulcerations and dilated tubes. So far this and the sixteenth proposition are counterparts of one another. We agree with Dr. Addison that the effects of an ancient pleurisy may be perceived in a dull condition of the chest, and the existence of permanent gurgling. In this way we have no doubt that many cases of dilated bronchial tubes have originated ; we can also affirm the truth of the statement that the co-existence of effusion into the pleura, with bronchial flux, may cause signs very similar to those of cavities in the lung, as least so far as gurgling is concerned. He would, however, be but a sorry investigator who would not bear in mind that rules of diagnosis founded on the phenomena of ordinary cases, must be used with caution, when applied to new combinations of circumstances.

The facts contained in the first part of this proposition we have shewn are not original. Neither are those in the second. Let us refer our readers to the memoirs of the late Professor Greene, on the pathology and diagnosis of empyema, published in the seventeenth volume of our first series. In these excellent and original papers the simulation of phthisis by a combination of pleurisy and bronchitis is strongly dwelt upon.

In the author's commentaries on this proposition, he speaks

of the displacement of the heart to the right side in consequence of an absorption of an effusion into the right pleura, as an original discovery:

"Acute disease set up in the opposite lung destroyed life, and dissection proved the correctness of the opinion that had been formed as to the pleuritic origin of the disease in the right side. The remarkable displacement of the heart excited some surprise; nevertheless, I am disposed to conclude, from what I have seen in practice, that great contraction of the right chest after pleurisy almost as certainly draws the heart to the same, as extensive effusion into the left chest forces it towards the opposite side."

The discovery of dexiocardia, after absorption of effusion in the right pleura, does not belong to our author. It was made and recorded many years ago. The case is given in Dr. Stokes's work on Diseases of the Chest, from which we shall quote:

"No observations have been as yet recorded of the effect on the heart by the absorption of effusions into the right pleura. I have ascertained, however, that this circumstance may so modify the position of the heart, as to cause its extensive displacement, and thus produce the displacement of the heart to the right side, consequent on the removal of an effusion of the right side."

In commenting on the case, which is given at length, and in which the diagnosis was based on the consideration of the laws of congenital transposition of viscera, Dr. Stokes observes that—

"While empyema of the left side forces the heart to the right of the mesial line, the rapid absorption of an empyema of the right side draws it in the same direction. This circumstance is obviously favoured by the rapidity of absorption when there is not time for the side to contract. It will be probably found to occur more or less in many cases, but particularly in those of the combination of an acute or chronic disease of the lung with pleuritis, the effusion being rapidly absorbed."

The influence of flatulent distention of the stomach and bowels in modifying the sounds on percussion in certain diseases of the chest has been long known. Our attention is drawn to it in the twenty-first proposition, where it is stated that flatulency of the stomach or intestines will produce good resonance over the diseased portion of the lung. But this by no means expresses the truth of the matter nor the state of knowledge on the subject. The terms "good resonance" and "a remarkable degree of resonance" imply that this resonance is the natural

healthy resonance of the lung; but it is not so,—the tone or character of the sound is altogether different; indeed we know nothing more characteristic than this sound, to which the name of "tympanitic dulness" has been given. The observer who would commit the mistake alluded to must have a badly-educated ear.

The author should have alluded to the researches of Dr. Graves on effusions of air within the chest in pneumonia, and to those of Dr. Hudson on the sound on percussion in typhoid affections of the lung. The important facts contained in these memoirs would be useful in augmenting the lists of fallacies such as are recorded by the author, but which chiefly result from imperfect knowledge or insufficient observation.

In the same proposition the production of amphoric respiration and metallic tinkling, from flatulent distention of the abdomen, is pointed out as leading to the erroneous conclusion that pneumothorax was present, and an interesting case is given illustrative of this source of fallacy. Dr. Addison continues:

"Charlotte C., aged 19, was admitted into our summer clinical wards, complaining of some pain and tenderness over the whole of the abdomen, but especially on the right side, and the bowels appeared to be greatly distended with flatus. These complaints were of a month's standing; but, about three months prior to admission, she had had an attack of inflammation within the chest, and was still harassed by a short, dry cough.

"On the right side of the chest anteriorly, there was an increase of resonance as high as the third rib; and even to the apex the resonance was greater than normal: dulness at the base of the same lung posteriorly.

"Respiration was puerile in the apices of both lungs anteriorly, mixed with sibilant rales in the right. On the right side, as high as the third rib, slight and distant crepitation, with a metallic state of the breathing; and when she spoke or coughed similar amphoric sounds were to be heard. Accompanying these amphoric sounds we had the *tintement metallique.*

"On inspection after death, the pleuræ on both sides of the chest were adherent, but the diaphragm had been raised up high within the chest, partly by the inflated bowels, and partly, on the right side, by old adhesions between it and the base of the lung. A vast fæcal abscess extended from the pelvis to the under surface of the diaphragm on the right side. From this inflated surface, or from the distended intestines, or from both, had originated the great resonance, the amphoric sound, and *tintement metallique.*"

It is not stated whether the diagnosis of pneumothorax and fistula was, or was not, made in this case. This is to be

regretted: it is plain, however, that the case would not have led to an erroneous diagnosis by any well-informed observer; for the fact of the puerile character of respiration in the upper portion of the affected side would have awakened his suspicion that the case was not the ordinary pneumothorax with collapse of the lung.

The metallic character, however, may be given to every one of the physical phenomena of the chest from simple distention of the stomach and intestines with air. All the rales, from the finest crepitus to gurgling, as well as the vocal phenomena, such as pectoriloquism, bronchophony, and ægophonia, may become metallic under these circumstances. The friction-sounds of pleurisy and pericarditis, and the sounds of the heart, are liable to this modification, which, however, should not deceive a practitioner of any clinical experience.

We have now examined the most important of these propositions; those which remain are principally devoted to pleurisy and diseases of the heart; and there are some interesting observations on the extrinsic cardiac murmurs, to which Dr. Addison has given the term pulmonic. On this subject, however, Dr. Addison has been preceded by other investigators, whom it would have been better to have noticed. Every new fact, however, on this obscure subject, is of great importance. The author still doubts whether these murmurs may not, in every instance, be associated with some slight or circumscribed adhesion, or albuminous deposit. The whole subject is still open to investigation.

It will not be out of place to offer some remarks as to the state of opinion on the subject of diagnosis. Without referring to the division into the so-called physical and non-physical diagnosis, we may consider this part of medicine before the time of Laennec, as compared with its present state. The introduction of auscultation was held to be an innovation, and a certain feeling was excited against it. This, of course, extended to its subsidiary means, and the medical world was divided into two parties, one professing, the other condemning, the new methods of investigation. But the innovation was one more in appearance than reality; and, as we have endeavoured to shew, the efforts of all right-thinking men were directed rather to establish a complete system of diagnosis, which should embrace all available methods of arriving at an exact knowledge of disease, than to determine the actual value of any newly-observed signs, considered singly, or even in combination.

It is admitted generally that there is no pathognomic sign of any disease; and some have gone so far as to declare that no

possible combination of physical signs will be found pathognomonic. This opinion has been strongly expressed by Dr. Stokes, but we think that in certain cases it would be possible to form a correct diagnosis from combinations of even the acoustic signs. Such cases would, of course, be rare.

The examination of the various signs and their combinations, considered as simple physical phenomena, has not been neglected; but there is still a wide field of investigation open to any observer, who, with a thorough knowledge of physical science, and, in particular, that portion devoted to the laws of sound and its transmission through various media, would devote himself to the study of the acoustic phenomena in all diseases of the thorax and abdomen, and by experience and observation determine their actual value. We desire to see the same mode of investigation applied to all the internal diseases, which has already, in the hands of Drs. Hope, Corrigan, and Williams, produced such good results in cardiac pathology.

For although we have ever held that the neglect of the symptoms and history, while we depended on such physical signs as the new methods have given us, could only lead to error, we believe that a more accurate method of studying these so-called physical signs would be followed by advantage. In the present state of the question we find similar, or apparently similar physical signs in very different diseases; yet the point is still to be settled as to whether this similarity arises from deficiency of our powers of observation.

Could we apply to acoustic signs a power analogous to that of the microscope in examining forms, it might happen that the rale of a sthenic inflammation would be found to differ from that of an asthenic, or specific disease, although to the unassisted sense it might appear the same. But even if such a power was obtained, it would be far from probable that we could dispense with other means of diagnosis.

But how few appear to have correct notions as to the terms employed in these inquiries, or use them merely in a conventional sense. Some restrict the term physical signs solely to the acoustic phenomena, as observed by the stethoscope and percussion; others, more correctly, include the modifications of form or size, and the results of touch. Practically, the term physical diagnosis is applied to the methods discovered by Laennec and his followers, while it is refused to those in use from the earliest periods. But there is an error here, and a little consideration will shew that in physical diagnosis is embraced a large portion of our means of investigating disease. The terms, *φύσις* and *φυσικός*, apply to nature in its widest

sense, its productions, its relations, and its inscrutable laws; everything, life even included, is physical in this sense. And thus, when we inquire what is a physical sign and what is not, we find the distinction to be often difficult; and, in truth, those who oppose physical diagnosis, themselves employ it, though perhaps unwittingly. For, if we except the information derived from the statement of the patient's sensations, almost all other diagnosis is *physical*, that is to say, founded on observation of physical phenomena.

We are called to a case of fever; the patient is in coma, and can give us no information; all our diagnosis becomes physical. The temperature of the body,—the appearance of the mouth and tongue,—the state and volume of the pulse,—the condition of the abdomen,—the appearance of the secretions, are all examined; and we may often see this done by a physician who ridicules physical diagnosis. Yet in employing his senses of touch and sight he avails himself of physical phenomena, just as much as if he employed the stethoscope. The same will apply to all diseases. The volume, rhythm, strength, and rate of a pulse, are physical phenomena. The mechanical and chemical characters of all secretions are physical phenomena. The expression of the countenance,—the temperature of the surface,—the character of all convulsive actions,—great or general emaciation, or plethora,—the peculiar odour of the body, and of the secretions,—the various characters of cutaneous disease,—may all be adduced as examples of physical phenomena, just as much as a bellows murmur or a crepitating rale.

If, as we have before said, a division is to be attempted, it must be into two classes. In the first is to be placed the facts of which we have no cognizance through our senses, but which are stated to us by the patient himself; while into the second enter observations of phenomena revealed to us by sight, touch, hearing, smelling, or taste.

The observations we have made on Dr. Addison's paper will shew how much importance we attach to it. We do not accuse him of any attempt to unsettle men's minds, and shake their confidence in diagnosis generally; on the contrary, we believe his object has been to advance truth; but we fear that the effect of his paper will not be for good. We have endeavoured to shew that he has failed to make out a case of fallacy in physical diagnosis, as, if we only consider the results of auscultation, the cases are not completely, and therefore not fairly stated. Injury, too, will be done by attributing, indirectly, to writers of authority, the opinions and errors of men of no

authority, and by which physical diagnosis is thus, in a manner, injured. Finally, with respect to the difficulties of the subject, we assure him that there are few well-informed men in this or other countries who are not fully aware of them; and that to overcome, or notably diminish them, requires an accurate method of observation,—a devoted spirit of inquiry,—a strong feeling of justice,—a life of labour.

The sanative Influence of Climate. By Sir James Clark, Bart., M.D. Fourth Edition. London, Murray; Churchill. 1846. pp. 412.

In the twentieth volume of the First Series of this Journal we had occasion to notice the third edition of this excellent and useful work; and we are rejoiced to find that its merits have rendered another edition necessary. In the preface to the present work the author observes:

"In the successive editions of this work I gave such additional information as I had been able to collect from authentic sources in the intervals of publication.

"The present edition will, I trust, be found in all respects a material improvement on its predecessors. Every article in this work has been carefully revised; and although I have seen no reason to change my opinions on the characters of the different climates treated of, the information I have continued to receive from others, added to my own increasing experience, has enabled me with more confidence and precision to lay down rules respecting the adaptation of certain climates to the cure of particular diseases."

Having carefully compared this with the third edition, we can truly testify that the author has bestowed on it great additional labour, and has enriched it by the insertion of much valuable matter; indeed situated as Sir James Clark is and has been, it could scarcely be otherwise, for the influence of climate and diseases has engaged his attention from the very commencement of his career; and having travelled much, and for a considerable time practised abroad, he enjoyed ample opportunities of collecting materials for his work; and since its first publication, his position in London, where he has been for many years so generally consulted in cases where change of climate was deemed advisable, has necessarily forced upon him additional attention to his favourite subject, and has abundantly supplied him with new and valuable facts communicated either by his patients, or by the numerous physicians in various parts

of the world, whose co-operation he had secured in prosecuting his inquiries. The results at which Sir James has thus arrived are, therefore, the fruits of numerous observations accurately registered and arranged during many successive years ; and they form for the practical physician a trustworthy guide, which will enable him to determine what particular climate will best suit each case. In no department of medical science has greater progress been lately made than in this. We ourselves remember the time when patients were ordered abroad by even the best-informed physicians more upon chance than on principle, for they had no certain data to rely on ; and hence it too frequently happened that the unhappy exile from his country was sent to places quite unsuited to the nature of his disease, and consequently he incurred much expense and underwent great fatigue, and, when too late, discovered that he had aggravated his sufferings and harassed his friends by following injudicious advice. He soon felt himself to be in pursuit of a deceptive shadow ; he endeavoured to banish the harassing thought that he might have lived had he never quitted the paternal roof ; and thus were his last hours embittered ; the memory of home was no longer sweet, " nec dulces moriens reminiscitur Argos."

Having ourselves commenced practice in Naples at the time that the name of *Giacomo Clark* was beginning to attract attention in Rome, we can bear testimony to the industry which he was even then reported to have bestowed on everything connected with the climate of Italy, and to the pains he seemed to have taken, in more than one case that fell under our notice, to ascertain how far he was justified in adhering to the usual routine directions given to travelling invalids. This line of study soon led him to the conclusion that the whole subject of climate, as suited to British patients in search of health abroad, was encumbered with a great amount of prejudice and error, and required to be worked out *de novo*, before it could assume its proper place in medical science. Having addressed himself to this task, he has never since lost sight of his object, but has availed himself of the numerous opportunities which the happy prevalence of a general peace has afforded to English travellers and physicians, to add to our stores of knowledge ; and in this he has been aided by the labours of numerous authors, whose works he candidly quotes. We beg leave, however, to direct Sir James Clark's attention on the subject of the climate of Madeira, and everything connected with the sojourn of an invalid in that island, to the Second Edition of Mr. Wilde's Narrative, which Sir James seems not to have read. The unrivalled repertory of facts connected with the influence of climate on the

health of Britons, which has been published by Tulloch, under the sanction of Sir James M'Gregor, contains invaluable materials, which have been judiciously used by Sir James Clark.

Every one engaged in the statistics of health must deeply regret that we have no similar record of the Roman legions. How interesting would it be to compare the health of the modern and ancient soldier, either during a campaign or a peaceful residence in the same country. The Empire of the Cæsars had military stations permanently fixed in the most distant parts of the then known world, and, therefore, their medical officers might have accumulated statistical information of the greatest interest. But, unfortunately, although the Romans, as conquerors, in many respects resembled the English,—although, like the latter, they fostered the laws, respected the prejudices, and tolerated the religion of the conquered,—yet they effected comparatively little for any science, except geography. Malte Brun, the great cosmographer, confessed that he always felt delight when the intelligence arrived that Britain had become entangled in some new contest in Asia or Africa, for her victories led to the acquisition of new knowledge in many departments of natural history and philology.

We cannot conclude this notice of Sir James Clark's book without reverting for a moment to the writings of the great Hippocrates on the subject of climate. His Essay on *Air, Water*, and *Situation*, contains the germs of that which Sir James Clark, and other modern authors, are endeavouring to bring to maturity; and it is interesting to observe how general and philosophical the views of Hippocrates were upon this subject. In calculating the probable sanitary condition of any given city, he directs the investigator to examine with care its aspect, climate as to temperature, nature of prevailing winds, the composition and *sources* of the water, the nature of the clothing, diet, and habitations of the citizens, and the relations of the seasons to each other, &c. &c. In short, it is clear that, had he been supplied with instruments and medical statistics, such as are now available,—had he but possessed the lights which guide the present cultivators of this important department of science,—he would have neglected no means of obtaining information, and would have explored every region of inquiry.

It is especially worthy of remark, that Hippocrates lost no opportunity of combating those religious prejudices which in his age, as in all others, are so apt to be associated with medical facts. Of course where such prejudices were encouraged by the priesthood, he was obliged to proceed cautiously, and in stating any particular religious theory connected with medicine, his lan-

guage was always respectful, and, without directly denying the article of belief in question, he brought forward arguments calculated to shake his reader's faith on the subject. A very curious instance of this occurs where he is speaking of diseases prevalent among the Scythians, and treats of impotency, which, he says, was almost solely confined to the rich, and was believed to be an infliction from the gods. This belief evidently threw the treatment of the most lucrative branch of the profession into the hands of the priesthood; we say the most lucrative, an assertion which no reader of a modern newspaper will be disposed to doubt, for the advertisements of the *Silent Friend class* are, in themselves, sufficient proof that impairment of virility, real or supposed, of all the veins ever worked by quacks, contains the richest ore. Hippocrates, therefore, merely ventures to doubt that the gods inflict this malady on the rich rather than on the poor; and the reasons for his doubts, he says, are two-fold. First, he thinks that the constant exercise on horseback, and too frequent sexual indulgence, are, in themselves, physical agents sufficient to account for the infirmity; and secondly, he thinks it very improbable that the gods should regard the rich with less favour than the poor. The rich man, he says, can afford to buy victims for sacrifice, and neglects none of the rites prescribed by his religious code, however expensive; while the poor man, on the contrary, can never offer a victim, rarely even a garland, and too frequently even curses the gods, whom he considers as the authors of all the evils which the poor man is destined to bear.

If, then, concludes Hippocrates, impotence proceeded not from the operation of natural causes, but from the direct interference of the gods, it would, assuredly, be more prevalent among the poor than the rich.

Another observation of Hippocrates, respecting climate, is worthy of notice. Speaking of the great difference observable between the nations of Asia and of Europe, he says, that something is attributable to race, more to climate, but most of all to the superiority of European above Asiatic forms of government; and perhaps no writer, ancient or modern, has described in happier language the manner in which the enjoyment of freedom acts upon the moral dispositions of man. This great physician too has explained why changeable climates, where the winter and summer exhibit a great difference of temperature, are favourable to moral and physical development; a fact of which there can be no doubt, notwithstanding the dreams of poets respecting soft and never-failing zephyrs, and ever-verdant fields. Did indeed such an Arcadia—such an earthly

paradise—exist, it would be totally unfit for man, who is so constituted, both in body and mind, that he cannot exist without constantly oscillating between the impulses of forces emanating from contending antagonistic principles.

A Tabular View of the physical Signs and Diagnosis of the Diseases of the Lungs; with a Synopsis of the Signs which occur in each Disease. By James Turnbull, M. D., Physician to the Liverpool Northern Hospital. London, Churchill. 1846.

Dr. Turnbull's Tabular View is formed on the model of Barth and Roget's excellent manual. After describing the divisions of the chest which have been made by auscultators, and the degree and character of the sounds elicited from each by percussion, the physical cause of the individual signs is explained, and the circumstances under which they are heard are enumerated; whilst the *stethoscopic* indications which would lead us to ascribe the sign to one or other of these are next very correctly given. These particulars are arranged in parallel columns, and printed on a large sheet about a yard square, which, we suppose, is intended to be fixed against the study wall for occasional consultation, where it would furnish a very convenient *souvenir* of useful knowledge; but in our opinion nothing can be more inconvenient and clumsy than the manner in which it is bound up in the volume. This however, is the publisher's fault, and with it Dr. Turnbull has not so much to do. We regard his Tabular View as, with the exception of Dr. Townsend's, the most accurate and judicious we have yet seen; it is at once concise, correct, and well arranged, and calculated to be a very useful guide to the student in auscultation,—as far, at least, as any table from which rational symptoms are altogether excluded can be so.

In the synopsis of Diseases of the Lungs there is no mention of malignant or heterologous deposits in the lung or mediastina; and perhaps, as the diagnosis of these affections is still, unhappily, so very obscure, the omission is not of so much importance. We cannot, however, make the same excuse for the total absence of any allusion to what Dr. Corrigan has called cirrhosis of the lung. Whatever may be the true pathology of this disease, its frequent simulation of phthisis, and the great displacement of organs to which it gives rise, renders the knowledge of its symptoms and nature both highly interesting and important. Chronic pneumonia, the diagnosis of which is given in the

Synopsis, is, undoubtedly, a much rarer affection than any of those we have mentioned, since some very able pathologists even doubt whether it have any real existence. We have seen as many as three cases of malignant disease of the lung exhibited at one meeting of the Dublin Pathological Society, but we have never met with a satisfactory instance of chronic pneumonia.

There are but one or two other remarks that we deem it necessary to make. In emphysema of the lung, the chest is not invariably, as represented by Dr. Turnbull, preternaturally rounded, &c.; the worst form of emphysema being that in which the chest does not yield to the increased volume of the lung. In pneumonia, bronchial respiration is not *always* a sign of hepatization, nor is it always heard in a hepatized lung, being absent altogether when the whole lung is solid, for the simple reason that there is then no motion of expansion to cause the air to enter the tubes in a current strong enough to produce a sound: consequently the appearance of bronchial respiration may indicate a decrease of disease, and not a passage into a more advanced stage. The section of the Synopsis which treats of phthisis is, indeed, correct, so far as it goes; but it would give the student a most incorrect idea of what he is to expect to meet with in that most protean affection. Surely Dr. Turnbull does not imagine that such very marked signs are to be expected in the *first* stage of consumption. We know he does not; yet what he has written would induce his reader to think so, and all attempts to teach the student diagnosis by physical indication, *alone*, lead him into the same error of imagining that the mere presence of tubercles in a lung necessarily gives rise to abnormal signs; than which there can scarcely be a more pernicious error.

The section on diseases of the pleura is excellent: but smoothness of the side, from obliteration of the intercostal spaces, is certainly not proportional to the mere amount of effusion, as has been very ably shewn by Dr. Stokes, in his truly classical work on the chest; nor is the effusion always bounded by a horizontal line, since fluid may be *encysted* in any situation.

We can very strongly recommend Dr. Turnbull's little work, as combining the important qualifications of conciseness, clearness, and great general accuracy. We think it one of the best charts of the kind that has yet appeared.

Observations on the History and Treatment of Dysentery and its Combinations; with an Examination of their Claims to a contagious Character, and an Inquiry into the Source of Contagion in its analogous Diseases, Angina, Erysipelas, Hospital Gangrene, and Puerperal Fever. By William Harty, M. D. Second edition. Dublin, Hodges and Smith. 1847. pp. 303.

"More than forty years have now elapsed since the first edition of this work met the public eye. It was published," says the author, "in 1805, shortly after I had graduated as M. B. in the University of Dublin, and ere I had yet completed my twenty-fifth year." Farther on in the Introduction, Dr. Harty tells us that to give a regular history of dysentery formed no part of his plan (although he believes that readers of his work will thence derive the most correct and accurate notions of all the various forms of the disease), his main object being to establish the following three propositions:

1. That the genuine and simple dysentery is unattended by idiopathic fever, and is never of itself contagious.

2. That every other form of the disease, when epidemic, is a combination of the simple dysentery either with intermittent, remittent, or continued fever.

3. That the combination with continued fever alone is contagious.

By "fever," in the first of these propositions, is principally intended acceleration of the pulse, which, by Copland and the English writers in general, is ranked among the most constant symptoms of dysentery. Dr. Harty, by a comparison of the descriptions of the epidemics witnessed by various authors, shews that this is a most decided error. We may remark that the error in question does not occur in any of the French standard works, where, under the head of "Appareil circulatoire," we always read: "Le pouls est ordinairement petit, quelquefois accéléré d'autres fois normal, quant à sa frequence, ou meme ralenti."(*a*) Cruveilhier, Grisolle, and others even divide dysentery into the apyrexial and pyrexial varieties. We do not know that the question is of any very great practical importance; but at all events Dr. Harty, with much learning and research, has shewn that the English writers are here most decidedly in error.

Dr. Harty's second and third propositions may be very fairly considered together, as the one is but the corollary to the

(*a*) Monneret and Fleury; Grisolle, &c. Art. Dysentérie.

other. We do not at all agree with the author as to the importance of what he seeks to establish. Some of the highest authorities in medicine, as Drs. Cheyne, Stokes, &c., have certainly acceded to the opinion that dysentery becomes contagious when combined with fever; but we do not think that any of these eminent physicians ever attempted at the bedside to say to their pupils, "this is a case of dysentery combined with typhus, and *therefore* it is contagious;" yet unless this could be done, we do not see what possible utility there can be in discussing the question at all.

The idea of the possible propagation of dysentery by means of the contagion of fever combined with it, was first distinctly put forth by Pinel(*a*), in 1793, and shortly afterwards fully discussed, and most ably investigated by Fleury(*b*); but Hoffman (as mentioned by Dr. Harty in the present edition of his work) conceived that he had witnessed the combination, and attributed to it unusual mortality. In Hoffman's time, however, neither fever nor dysentery were very accurately marked out and distinguished, nor has Dr. Harty defined what meaning he attaches to the terms. We believe that it is the general opinion of the best pathologists that there is no fixed and invariable lesion characteristic of dysentery; and Dr. Harty has shewn that Copland's definition does not correctly apply to a large number of the epidemics, accounts of which are on record; whilst the epidemics called dysentery by Degner and Willis were certainly not that disease, but either cholera or diarrhœa. On the other hand, what physician is ignorant of the disputes as to the difference or identity of dothinenterite, typhus, and typhoid fever. Surely, then, we ought to be able to discriminate simples before we speculate on the qualities of the supposed compounds? Dr. Harty, however, does not enter at all either into the pathology or diagnosis of dysentery, a circumstance which very much impairs the force of his reasoning, and greatly diminishes the value of his work. Chomel, one of the most eminent physicians the present century has produced, regards as contagious that form of dysentery alone which depends on ulceration of the large intestines(*c*); yet the views of this very eminent practitioner have not once been alluded to by Dr. Harty. But let us consider the nature of the proof offered in support of this theory of a compound contagion. The best definition of dysentery that we know of is that given

(*a*) *Nosologie Méthod.* t. ii. p. 328.

(*b*) *Essai sur la Dysentérie, avec quelques Considérations générales sur sa Frèquence a bord des navires.* Paris, 1803.

(*c*) *Chomel et Blache; Dict. de Méd.* t. x.

by MM. Monneret and Fleury in their great work on medicine: "A desire to go to stool, occurring more or less frequently, and often incessant, with the scanty, and generally painful, evacuation of the matters secreted by the intestinal follicles, invariably accompanied by an exhalation of blood from the cavity of the intestine." These characters sufficiently distinguish the disease from cholera on the one hand, and from simple diarrhœa on the other, although in practice we shall often find the three affections shade into each other by imperceptible gradations. Now, so far, we can see our way plainly enough; but we confess we know of no means of distinguishing the prostration accompanying some cases of purulent softening of the lung, pericarditis, enteritis, &c. &c., from that which is the result of idiopathic fever. Over and over again we have seen, in various continental cities, cases presenting every indication that in Ireland would characterize simple typhus, without any appreciable disease of the intestinal tube, in which, notwithstanding, on being followed to the dead-house, we have found the usual follicular ulceration in the neighbourhood of the ileo-cæcal valve, which has been so elaborately described by Louis, Cruveilhier, and Rokitansky. Even our own limited experience of epidemic dysentery has likewise afforded us cases in which extensive ulcerations were detected after death, although during life it was impossible to distinguish them from other cases in which the intestines were found to be perfectly sound. During the present Session two specimens of intestines have been brought under the notice of our Pathological Society, one presenting no indications of disease, although the patient died with symptoms of dysentery, and the other exhibiting thickening, œdema, and ulceration of nearly the whole extent of the large intestine, though the patient was only affected with spitting of blood and purpura, without any dysentery whatsoever. In fact, when we consider what has been written on the pathology of this disease (a subject which, as we have already said, Dr. Harty has not touched upon throughout the whole course of his work) by MM. Fournier and Vaidy(*a*), Fodéré(*b*), Roche(*c*), Gely(*d*), Guéretin(*e*), Thomas of Tours(*f*), Chomel and Blache, &c.; it is only deep-rooted prejudice in favour of the mania of *anatomical lesions*, that can prevent us from perceiving that the state of the intes-

(*a*) *Dict. des. Sc. Méd.* (*b*) *Leçons sur les Epid.* t. ii.
(*c*) *Dict. de Méd. et de Chir. prat.*
(*d*) *Essai sur les Altérations anatomiques qui constituent specialement l'Etat dysentérique.* Nantes.
(*e*) *Mém. sur la Dys. &c., Archives Gén. de Méd.* série n. t. vii.
(*f*) *Arch. génér. de Méd.* vii.

tine bears no constant relation whatsoever to the nature and intensity of the symptoms; and that not a few of the above eminent authors, in common with the majority of those who preceded them, were actually under this prejudice, will appear more evident, when we consider that many of them speak of peculiar characters as indicating inflammation of the isolated follicles in the large intestine, though it results from the anatomical researches of M. Guillot(*b*), published a few years since, *that such isolated follicles have no actual existence!*

Dr. Harty has shewn much diligence and learning in searching out amongst the older authors for facts in support of his views; but we cannot help thinking that he would have acted more judiciously in not loading his pages with such an enormous amount of Latin and French(*c*), but particularly the former. In England the Sydenham Society is a proof of how very little these languages are understood by the great mass of the profession; and although, in Ireland, we are better off in this respect, we know with what reluctance the majority of practical men, long out of college, sit down actually *to study* a work in a strange tongue.

The entire of the Doctor's argument for compound contagion consists in this,—that in beleaguered towns, where the inhabitants are exposed to the combined influences of filth, over-crowding, cold, wet, misery and destitution of every kind, whilst they breathe an atmosphere tainted by the putrid emanations of the unburied dead,—if dysentery occur, it cannot be combatted by bleeding and antiphlogistics, as in other cases, but requires the administration of stimulants; adynamic symptoms are very intense; petechiæ frequent; extension of the disease common; its progress rapid; and the mortality frightful. Now in all this we see but the illustration of those principles which have been so well brought out by the discussion in the French Academy of Medicine on the subject of plague. If the reader will refer to our article on "Quarantine and the Plague," published in our last Number, he will see that the group of phenomena above alluded to are but the general antecedents (or cause) of most adynamic or malignant febrile states; and the further he investigates the subject of contagion, he will see the more reason to believe that angina, malignant

(*a*) *Journ. l'Expérience*, 1re ann. No. 11.

(*b*) The extracts from M. Vignes' Treatise (*Traité Complet de la Dysentérie*, Paris, 1825), form some of the most valuable pages in Dr. Harty's work; and the strong encomiums passed on M. Vignes will, we are sure, be fully coincided in by all who have perused the admirable record of his experience here referred to.

erysipelas, hospital gangrene, and puerperal fever, are not, as supposed by Dr. Harty, local affections complicated with typhus, but general or essential diseases, which, like scarlatina and measles, have some local symptoms more or less frequently present. Even Dr. Harty does not maintain that gangrene occurring in a fever patient is identical with hospital gangrene, or that, if a fever patient be attacked with peritonitis, he has *puerperal* fever. We have seen patients die of puerperal fever without any local lesion; and we have seen puerperal women affected with spotted fever, without their disease bearing any similitude to puerperal fever, except indeed in the prostration,—the common characteristic of too many constitutional affections to be of any *diagnostic* value.

We might adduce many other very strong arguments in proof of the position of Sydenham, "Et sane Dysenteria de qua agitur, *ipsissima illa febris est;* hoc tantum discrimine quod introvertatur, et in intestina se exonerans per eadem viam sibi faciat"(*a*); but we only remind the reader that dysentery, when truly epidemic, in its course, progress, and general characteristics, presents the closest analogy with the progress of plague, cholera, influenza, &c., under similar circumstances; that its occasional alternation with rheumatic pains and neuralgia is not more remarkable than its being similarly acted on by the springing up of a purulent ophthalmia, a pneumonia, &c.; and that its intermittence in marshy districts, like the intermittence of phthisis and pneumonia in the same kind of localities, has not been sufficiently studied to be made a ground of reasoning. As to the *contagion* of dysentery, we fully agree with the very learned and able authors of the *Compendium de Médicine Pràtique*(*b*), who, after comparing the accounts of *seventy-seven* epidemics of dysentery, conclude that, inasmuch as nearly all the alleged cases of communication of the malady have been witnessed abroad, amid the confusion of war, in camps, ships, hospitals, and in localities subject to the epidemic and hygienic influences which gave rise to the dysentery in the first instance, the argument for contagion, in respect to that disease, is really not nearly so strong as has been adduced to prove that *phthisis* and *intermittent fever* are also communicable, and

(*a*) *Sydenham Opera.* Lug. Bat. 1726, p. 45. Dr. Harty alludes to this passage in Sydenham's work, and seems to find some difficulty in comprehending what is meant by it. If, however, he will turn to the description, given by the same author, of the epidemics of 1669, 1670, 1671, and 1672, where the conformity of dysentery to the usual course of epidemics is fully illustrated, he will see that Sydenham evidently entertained the views that we have attributed to him.

(*b*) Vol iii. Art. Dysentérie.

therefore that new investigations are required before we can admit either the one or the other.

Although we have thus been compelled to express our dissent from so many of the opinions put forth by Dr. Harty, we cannot deny him the credit of great learning, good sense, and acuteness; and the first edition of his work must have proved of far more material service to the cyclopædia writers who have published since 1805, than has been generally acknowledged. Being, however, composed entirely with a view to proving the propositions above alluded to, the arrangement is certainly not that which is best adapted to convey to the reader the most clear and accurate ideas of the nature and course of dysentery; nor do we think that the entire work furnishes the materials for anything like a complete description of the disease. The chapter on Treatment, however, is written with no such special object in view, and is certainly a most judicious and well-arranged, as well as a concise digest of the experience of authors. It is one of the best in the English language; and we have only to regret that Dr. Harty does not seem sufficiently impressed with the changing characters of dysentery, which requires us to study carefully each epidemic; our first attempts at treatment being, to a great extent, purely tentative, and directed only by the degree of knowledge which we may possess of the "epidemic constitution" of the time,—a principle, by-the-by, which was very fully understood and illustrated by Dr. Rutty, of this city, a century since. It is careful descriptions of epidemics, therefore, that we chiefly want, and it is to be hoped that at the present time, when dysentery is so rife amongst us, those medical men who have the charge of public institutions will not be so culpably negligent of their duty to the profession and to humanity, as to refuse to put on record, for the guidance of posterity, a minute detail of all the peculiarities of the present awful visitation.

In concluding our notice of Dr. Harty's work, we cannot avoid observing upon one or two altogether ill-judged and uncalled-for indications which it presents of the bad spirit of those bad times (now, happily, almost completely passed away, and for ever), when it was the fashion for Irishmen to ridicule and despise whatever was *Irish*, totally irrespective of its merits or demerits. The Doctor, in speaking of some of these numerous visitations of epidemic dysentery which the misery and misfortunes of our country have so often produced among our afflicted people, remarks, that in 1741 and in 1817 the sufferers were left to be relieved by private benevolence alone, unassisted by Parliamentary aid; whilst "The fever and famine

of 1800, occurring during the agitating enactment of the Union, were abandoned to the same agency, without any aid from English benevolence or from the State, except by bounties on the importation of corn, by an Act suspending distillation from grain, and by a *sage*" (in italics) " but well-meant resolution of Lords and Commons," which is given in a note as " *illustrative of Irish legislative wisdom*," and is to the effect that, owing to the high price of grain afflicting severely the lower classes, the Lords and Commons of Ireland bind themselves in honour to restrict as much as possible the use of grain in their households, concluding thus: " That during the same period (of six months) we will discontinue and cause to be discontinued all pastry made of wheaten flour; and we likewise agree that, during the same period, we will to the utmost of our power endeavour to economise and retrench the quantity of oats now made use of by our horses." So far from ridiculing or feeling ashamed of such measures and resolutions, we recognise in them a generous feeling of philanthropy and sound political wisdom. They are exactly the measures which in English, continental, and American journals have been most warmly advocated within the last few months. True it is, that not in England merely, but in America, on the Continent, in India, Africa, and Australia, most generous subscriptions have on the present occasion been raised for the relief of Irish distress, and even foreign governments have come forward to aid us; whilst at Rome, at Constantinople, at Geneva, and at Canterbury, the seats of the most opposite and conflicting creeds, the same good feelings have been strongly manifested. " Man *does*" now " feel for man." We rejoice to see on every hand such an inclination in mankind to overleap the petty barriers of government, country, race, and creed, and to acknowledge in the mere attributes of humanity, and exposure to suffering, " a nat'ral bond of brotherhood," and a prescriptive title to sympathy and relief, equally blessed to him that gives and him that receives. Even the infatuation of " glory" will not easily induce mankind to murder either their benefactors or those whom they have saved from starvation, and famine may thus have sown the seed of peace.

Finally, in perfect confidence that the utterly false and groundless charge of impatience, turbulence, and insubordination on the part of our suffering millions requires no refutation to any who know the real state of our population, who have read the account of the plague in London (which, by-the-by, Dr. Harty views as dysentery), or have but glanced at the condition of other countries whilst smarting under similar afflic-

tions, we would now take leave of our readers with the most fervent wish that the generous sympathies of mankind may be confirmed and expanded, without interruption and without limit, by everything that makes communication easier and more rapid, and the dominion of the Press more extensive, but that our beloved country may never again present such a theatre for the exhibition of commiseration or liberality as, unhappily, it does at this moment.

Outlines of Structural and Physiological Botany. By Arthur Henfrey, F. L. S. London, Van Voorst. 1847. pp. 292.

It is now nearly 200 years since Nehemiah Grew presented to the Royal Society the results of his immortal researches into the intimate structure of plants. The original rude microscopes of Cornelius Drebbel and Zachariah Janssen had just undergone, from the genius of Hook, their first great improvement, and thus became, in the hands of Grew and his celebrated contemporary, Malpighi, the agent through whose means a new æra sprung up in the history of botany,—an epoch, in its progress, we believe the most important it had experienced since it first rose from its Grecian cradle.

Since the days of Grew and Malpighi, however, important changes have taken place ; the employment of achromatic object-glasses in the construction of the microscope, and other valuable optical as well as mechanical improvements which, within the last few years, this great instrument of modern research has undergone, have enabled the botanist of the present day to pursue his phytotomical researches with a facility and success which, a short time since, could scarcely have been believed. Thus gifted with a new and mighty power, he unravels the complex web of organization, he surprises the nascent tissue at the moment of its birth, he traces its development, he watches its metamorphoses, he reads its strange, eventful history. Botanists are everywhere at work poring into the intricacies of vegetable structure, and are every day placing on record some new fact in the structure or economy of the organized elements of plants.

But how, it will be asked, is the student to acquire a knowledge of these discoveries, constituting so important a feature in the present state of botanical science? Is he to spend his life in hunting through the periodic literature of the day,

through the host of Transactions and Journals of almost every civilized nation on the earth?—for such are almost invariably the vehicle which men of science choose for the record of their labours. Thanks to several excellent elementary works, chiefly from the pens of our continental neighbours, such irreparable loss of time is, in a great measure, saved. But we know of no work which, in so small a space, so completely lays before the student the existing state of our knowledge of the structure and physiology of plants, as that which forms the subject of the present notice. Our author has, with great care and judgment, brought together, from the various works of modern botanists, all that is valuable in this department of science, thus laying the important, though previously, in many cases, almost inaccessible labours of German and other continental writers before the British student, in a concise manner, and freed from all extraneous matter, but, at the same time, perfectly intelligible.

But it would be doing an injustice to Mr. Henfrey to speak of his work as merely a compilation; on the contrary, we perpetually meet throughout its pages with original views of vegetable structure and function, which prove its author to be an accomplished observer, and which, united with the numerous original drawings which form so large a portion of the many hundred illustrations with which the book is so copiously supplied, render the "Outlines of Structural and Physiological Botany" a work of no mean merit as a record of new truths.

But Mr. Henfrey's work possesses another most important feature which cannot here be passed over unnoticed. We allude to the manner in which our author places before his readers the relations between chemistry and botany. Scarcely of less importance to the physiologist is the astonishing advance which, within the last few years, has been made in chemical science, than is the improvement already alluded to as having taken place within about the same period in the construction of microscopes; and yet we know of no British work on botany, except the present, in which the relations between chemical and vital phenomena are more than casually and imperfectly alluded to. In that now before us, on the contrary, the whole of the first chapter is occupied with the chemical composition of vegetables, in accordance with the modern improved notions upon this subject; and wherever, throughout the work, the laws of chemistry may be made available in elucidating the obscure phenomena of vegetable life, the reader is placed in possession of the known facts as fully as is compatible with the small space necessarily allotted to the book.

Upon the whole we look upon the present little volume as by far the most important manual of structural botany ever placed in the hands of the English student.

An Essay on the Tongue in functional Derangement of the Stomach and Bowels, and on the appropriate Treatment; also the Tongue's Aspect in organic Disease of the Lungs and Heart, &c. By Edward Williams, M.D. London, Simpkin, Marshall, and Co.; Renshaw. 1846. pp. 236.

This is a second edition of a work designed to exhibit, in a condensed form, the result of the author's researches into the state of the tongue as a symptom of disease. Every practical physician must admit the importance of the object. It cannot be denied that our knowledge of the varying aspects of this important organ is still far removed from that exactness and simplicity that are consistent with the present advanced state of medical science, and that a clear, concise, and intelligible exposition of its indications is still a desideratum.

This defect in the semeiology of the present day has not been the result of under-valuing the assistance it is capable of affording in disease, and the consequent neglect of the different appearances it presents. No organ has been more frequently looked at than the tongue; but several circumstances of a special nature have prevented our deriving that advantage from its examination that might have been expected. The great variety of the appearances it exhibits, the difficulty of describing these distinctly, the frequent variations in its appect during the course of the same disease, the modifications imprinted on it by the changing qualities of food or medicine, have all tended to embarrass and confuse the labour of past observers. But there is one circumstance, which, more than any other, has tended to throw doubt and uncertainty upon the subject, and it is this, the impossibility of ascertaining, by direct examination, the actual condition of those other organs in the body with which it sympathizes, during the varying aspects it assumes. In very few instances, indeed, can the revelations of the dissecting table be expected to throw any light upon the indications of the tongue. In saying this we do not mean to assert that our knowledge on this subject must always remain in its present crude and unsettled condition.

But to those who have studied the works of Froriep and the researches of Andral and Louis, on the relations of the tongue to the inflammatory and the various organic diseases of the

stomach, and who recollect that these eminent and trustworthy observers have shewn that there is no constant relation between the most important lesions of the stomach and the condition of the tongue in any case,—it will require very strong evidence indeed to convince them that there is any constant relation between the appearances of the tongue and the merely functional derangements of the great organ of alimentation.

We believe that the problem, however difficult, will yet be solved; but it will be by the exercise of a greater degree of exactness in observing cases in all their details, and by a more pains-taking patience in comparing them together, than has yet been brought to bear on them. Meanwhile every attempt to elucidate its intricacies ought to be hailed with gratitude, while fair allowance must be made for the difficulties that encompass the undertaking. In one respect the work before us deserves to be commended, and that is the extent of basis upon which it is founded, and the amount of labour necessarily incurred in drawing it up. It contains the analysis of nearly 1000 cases, and Dr. Williams informs us that these are but a portion of the whole number he has had occasion to investigate for this particular purpose. It is an example of the "statistical method" of medical education, and presents to the view of the reader only a condensed summary of the cases themselves, a proceeding which, however useful to an individual already familiar with their general bearing, from having had an opportunity of observing them personally, can be of comparatively little value to the general reader.

Such tables, to be really useful, should be appended to a detailed account, either of the whole number of cases reported, or at least of such a fair proportion of them as would give a tolerably accurate idea of their general character. The value of statistical tables depends on our being convinced that the cases examined strictly deserve the title they receive. Nearly 800 of the cases analyzed are what Dr. Williams calls "Functional derangement of the Stomach or Bowels." He gives us no definition of these diseases. He gives us no example. So large a number of cases collected together by one individual, may well make us suspicious of their exact nature. Added to this, there is a looseness of expression in the very brief notice of the coexistence of particular symptoms, that increases our doubts upon this subject. The main feature of the work is to shew that preternatural development of the papillæ of the tongue is the sign of gastric derangement, as contrasted with intestinal. The latter state, on the contrary, is indicated by various morbid conditions, while the papillæ cease to be de-

tected. From the circumstance already mentioned the force of Dr. Williams' argument is greatly weakened, if not altogether lost, and the labour evidently bestowed in the composition of his tables, unfortunately, thrown away.

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1. *Suggestions towards the Improvement of the Sanitary Condition of the Metropolis.* By Thomas Antisell, M.R.C.S.E., &c. Dublin, M'Glashan. 1847. pp. 26.

2. *On the Sanitary Condition of Newcastle-on-Tyne, and the Means necessary for its Improvement.* By George Robinson, M.D., &c. Newcastle-on-Tyne, Richardson. 1847. pp. 60.

3. *Report of Proceedings of Commission for Improvement of Dublin.* Published in Saunders' News-Letter, for January 28, 1847, and following days. By Abraham Hayward, Esq., Q.C., and Charles Peter Brassington, Esq., Commissioners.

4. *Facts connected with the Social and Sanitary Condition of the Working Classes in the City of Dublin.* By Thomas Willis, F.S.S. Dublin, O'Gorman. 1845. pp. 59.

5. *Special Sanitary Report on the City of Dublin, contained in the Report upon the Tables of Deaths made to the Census Commissioners for the Year* 1841. By William Robert Wilde, M.R.I.A. Dublin, Alexander Thom. 1843.

We well recollect the feelings of surprise with which we first perused the Report of the Poor-Law Commissioners on the sanitary condition of the labouring population of Great Britain. We were aware of the value of manure for agricultural purposes; we prized the comforts of cleanliness; and we abhorred muddy streets, odoriferous sewers, and the hundred other nuisances that, in our ignorance, we imagined to be evils inseparable from a town life: but, familiar as we were with the wonders of steam and gas, we were not prepared to expect the proposal from grave and practical men to supply the habitations of each family,—of even the poorest,—with a water-cock and self-acting water-closet, a trapped drain, furnished with a self-acting flushing apparatus, and an involuntary system of warm ventilation; to cause these drains and water-closets to communicate with sewers built upon hydraulic principles, mathematically exact; to keep the water in the magazine and service-pipes constantly on, and at high pressure, so that, by

the use of a simple plug and hose, fires might almost instantaneously be extinguished, the streets washed clean every morning, and the fronts of the houses purified from soot and dust; to erect lofty chimneys, in communication with the sewers, at elevated situations, to carry off the gases generated by putrefaction, and to cause these gases to be subjected to decomposing heat previous to their escape; to collect the whole offal of towns in enormous tanks, and draft it to rural districts for the enrichment of the soil; to underdrain the whole of the country, and irrigate its surface; to replace the dense atmosphere of manufacturing towns with a purer air, and to consume by fire the smoke now vomited forth by the high chimneys of hundreds of factories. We could scarcely have deemed schemes of such magnitude practicable: but when we find them calmly and deliberately recommended by reasonable and experienced men, —the best means of effecting them dispassionately canvassed, the expense calculated, and found to be actually less than that of our present defective arrangements; parts of the design put into actual operation in some towns, or districts, and found to be successful; and a plan chalked out by means of which the entire system can be put into operation in a combined, consistent, and compulsory manner; we cannot but acknowledge that the design is worthy of the genius and enterprize of the age. We feel, as it were, transferred to the Augustan era, when men's minds were familiar with undertakings the most gigantic; when causeways were paved for hundreds of miles, so as to defy the destructive efforts of twenty centuries; when mighty aqueducts were carried over mountains and across valleys; when extensive gardens were laid out by the State for the recreation of the citizens, and games and sports, on the most magnificent and expensive scale, were planned for their amusement: in a word, we feel that we have fallen upon days in which enterprizes are designed and executed worthy of the iron empire while still in its integrity.

The recommendations of the Poor-Law and Health of Towns Commissioners, for improvement in the structural arrangements of towns(*a*), may be examined in either of two aspects; namely, first, as regards their economical relations to the national prosperity; and, secondly, in their connexion with the sanitary condition of the inhabitants of towns. Without deciding on the relative importance of these relations, we shall devote a short space to the consideration of each. Our

(*a*) See Report on the Sanitary Condition of the Labouring Population, 1842; and First Report of the Health of Towns Commission, 1844.

remarks shall be principally applied to the structural improvement of this city, at the same time that it will be necessary to refer to the general principles, which ought always to be kept before us in the consideration of these matters. In the present crisis we consider that the creation of a popular intelligence on these subjects is of great importance.

A nation may be regarded as a large farm, in which every means should be taken advantage of whereby the produce of the arable and pasture land may be made sufficient for the food of the live stock; and in which the offal of the latter should be saved and economized for the nourishment of the soil. By a providential arrangement, the two great classes of living beings, animals and plants, are made mutually dependent on each other for existence and support. The animal inhales the oxygen which the plant exhales; the latter prepares, in the laboratory of its tissues, the gluten and albumen necessary to form the blood of animals; and animals, in turn, give off, during life, in their excretions, and become wholly resolved, by putrefaction, after death, into the water, carbonic acid, and ammonia, which constitute the food of plants. The relation of the human race to its proper food is especially remarkable; in some shape or other, that food is almost entirely from the family of grasses. In cold climates man lives on oats and bere; in temperate regions he subsists on wheat, barley, rye, or maize; and in the torrid zone rice supplies his temperate appetite: even the animals which he uses for his food are principally grass-eating, such as the cow, the stag, and the sheep. Now, although the fossil flora contains abundant remains of ferns, horse-tails, and cycases, geology reveals to us no grasses: the origin of these vegetables was manifestly contemporary with the genesis of man, and of animals which graze; and we accordingly find that grasses, more than any other class of vegetables, demand the manure which animals yield(*a*). The utter dependence of the grasses upon manure for their support is well exemplified by experiments made by Boussingault. He reared clover and peas in a soil absolutely destitute of manure, and yet, upon analyzing them, they were found to have acquired an appreciable increase of nitrogen; this was not the case, however, with either wheat or oats(*b*).

In countries where agriculture is much improved, animal manure is saved with much precaution; the animals constituting

(*a*) See the Fossil Flora, by Lindley and Hutton; and that by Adolphe Brogniart.

(*b*) *Economie Rurale.*

the live stock are usually stall-fed in stables arranged on each side of a square; the liquid manure has drains formed for its conveyance, converging from each stall to a central cesspool; the solid manure and waste straw are collected into a heap near the cesspool; a pump communicates with the latter, which is usually covered, and some of the liquid matter is daily pumped up, and sprinkled on the solid. In many farms in Belgium a quantity of powdered gypsum is from time to time thrown into the cesspool, to absorb the ammonia. All this trouble and expense is taken because the farmer knows that without manure his corn will not grow; and if he does not save that which his live stock is capable of affording, he will have to transport it at an expensive rate from some distant place.

Now as the live stock of a well-arranged farm are collected into a square of stalls, so the inhabitants of all civilized countries are congregated into towns and cities; they bring with them from the open fields a vast number of cows, horses, and other animals; and it is the duty of a government to take measures so that the animal offal thus withdrawn from the place in which it is of value shall not be wasted, but shall be returned to the soil, to regenerate the food of the population, just as much as it is the interest of the farmer to do the same thing on a scale more limited.

To effect this object in large cities proper drains should originate in every habitation; these should communicate with sewers, made with an adequate fall, and of a form such as to offer least friction to the matter passing through them. These sewers may discharge themselves into tanks sufficiently capacious; or, what would probably be preferable, into a system of winding vaults, flat-bottomed, and arched above, covered like the farm cesspool, and, in a similar manner, furnished with pumps and gully-holes. This cloaca should have a vent into the sea, or some river, to prevent the danger of bursting. But the best arrangement for collecting the manure of a city will fail unless there be an abundant supply of water, to flush the drains and sewers. This can be obtained, partly by economizing the rain which falls on a city, and partly by a high-pressure pipe-water service, such as will lift the water to the tops of the highest houses, if practicable. The details of the manner in which all these things can be effected is largely entered into in the Report of the Health of Towns Commission already referred to, as well as the outlay which would be requisite, and the least oppressive modes of levying the requisite rates. The application of these principles to the peculiar

circumstances of Dublin is ably described in Mr. Antisell's pamphlet.

But in this place we may be permitted to pause, with a feeling of deep regret, over the lamentable condition of agriculture in this country. Look over the civilized parts of the globe; look to China, where every nook is cultivated, and where human ordure, dried and powdered, is sprinkled over the fields with minute care; survey the peninsulas of India,—the table land of Mysore, standing several thousand feet above the level of the sea, waves with a rich rice crop, all derived from irrigation, supplied by gigantic tanks; the great River Indus is at stated periods tapped, or drawn off to the left and to the right, for the purposes of agriculture, until it becomes reduced to a petty stream. The tanks, supported by curved walls, or *bunds*, are in some instances thirty miles in circumference(*a*). Turn to Egypt, and examine the system of canals and tanks, which have raised the astonishment of both ancient and modern times. Belgium, Holland, Scotland, wherever, in fact, from a torrid climate, to a marshy or a meagre soil, difficulty has been thrown in the path of the agriculturist, this has been overcome, and man, through intellect and industry, has triumphed over every obstacle. But in green, luxuriant Ireland, where a bounteous soil, an equable climate, and numerous streams, invite to the culture of the land,—where nature has been so liberal, man has proved a spendthrift(*b*). But we shall draw a veil over this unpleasant subject, believing that a great reform is at hand, and that better times are approaching.

Having taken a rapid review of the important relations which the question of structural improvements in towns bears to the economy of national resources, we will direct the attention of the reader to the other point of view in which this subject may be considered, namely, in reference to the health and mortality of the inhabitants of towns and cities. The inquiry as to the sanitary condition of the English towns has led to the conclusion that a very different amount of mortality occurs in the different classes of society; that in towns the mortality is much greater than in agricultural districts; and that fever, consumption, and other diseases, which indicate a low amount of vitality, are prevalent in certain districts, in a direct ratio with the over-crowding, deficient ventilation, and filth which pervades them. It will be our business, in the remainder of this article, to examine the data in our possession, for the purpose

(*a*) See Hall's Fragments of Voyages and Travels, vol. i., third series.

(*b*) See Mr. Sullivan's paper on the waste of manure, in the Proceedings of the Royal Dublin Society, 1846.

of ascertaining whether they lead to similar conclusions as to the city of Dublin. It is probable that the health of towns will shortly become the subject of legislative interference, and it is most desirable that, in a question of such magnitude, a thorough knowledge of all its branches should be previously attained. It is possible that the deductions drawn from the evidence hitherto obtained, as to the health and mortality of English towns, may not be universally applicable; the circumstances of neighbouring countries, and the varieties of soil, temperature, moisture, aliment, and habits, may be very different. It may be that propositions rightly predicable of one kingdom may not be so of another: it is necessary, therefore, by whatever lights we do possess, to examine whether Dublin appears to be subject to the same laws of disease and mortality as govern, we are told, in English towns; and if such do not seem to be the case, it will constitute a strong argument for a special inquiry into the peculiar circumstances of the towns situated in this country, previous to legislation being instituted.

The climate of Ireland one would, *a priori*, suppose to be peculiarly favourable to longevity; moist and equable, it is not subject to the burning heats or piercing colds that are experienced on great continents; the consequence is, that vegetation is peculiarly favoured in this island; the myrtle blooms in the open air on the sides of Glenarm, in latitude 55°, the same as that of Koningsburg in Prussia, where in winter the thermometer often sinks to the fifth degree of Fahrenheit. The animals and plants of the gulf of Biscay abound in the bays of Connemara(*a*), and the heaths and saxifrages of Spain adorn its picturesque surface. The great mildness and equability of the temperature is probably the cause of the rarity of intermittent fevers, which might otherwise have been expected to be frequent, from the great humidity of the soil.

If the general climate of Ireland be peculiarly favourable to health, there is nothing in the locality of Dublin calculated to place it in unfavourable contrast with other cities. We think Mr. Antisell goes too far when he says that "Dublin is notoriously the worst sewered, lighted, cleansed, and watered city in the empire." The streets being macadamized with calp (the cheapest stone in the vicinity), are certainly very difficult to be kept clean; but any one who has experienced the annoyance and injury to clothing produced by the black mud

(*a*) See Mr. M'Calla's paper on the Irish Flora and Fauna in the Proceedings of the Royal Dublin Society, 1847.

generated by the detrition of the whin-paved streets of Glasgow, will not be inclined to prefer it to the calcareous and easily-removable mud of the Dublin streets. The sewers are certainly built upon the oldest and worst construction, but the Westminster sewers, in the opinion of competent persons, are not much better, and the improved Holborn and Finsbury sewers are but a few years in use. We think that the Commissioners of Paving were justified in waiting until the true principles of sewerage became acknowledged and tested, before they put the citizens to expense in what might prove fruitless experiments; and, now that it is likely that a general and perfect system of drainage will be instituted in all great towns, under an enlightened and controlling authority, it would be idle to anticipate, in an expensive and incomplete manner, the intentions of the Legislature. But, at the same time that we are unwilling to condemn any one, we must not forget the evils of the present system. It appears that there are no main sewers on the north side of Merrion-square, in Westland-row, Henry-street, part of Sackville-street, North King-street, or James's-street; and if such be the condition of some of the best streets, what must be the state of the poorer districts. But the Commissioners are not to blame for this; it is the law, which throws, at once, the whole expense of building the part of the sewer opposite his dwelling upon the occupier, although his term might expire in a year. Mr. Tassy (the supervisor of paving) could not tell the Commissioner when the sewers were cleaned, and he stated that builders seldom inquired the level of the nearest sewer. The cost of scavenging, in 1841, was £6,924, and the produce brought £1,044; compare this with Edinburgh or Aberdeen, where the sale of the manure covers the expense either entirely or in chief part. But we are falling back to the economical branch of our inquiry, and we must return to the sanitary department of the subject.

Dublin is traversed by wide channels for ventilation; from west to east flows the river, flanked by broad and handsome quays, through the entire length of the city, fully three miles and a half. Some of the streets, running from north to south, are also very wide; large squares and parks are situated in different localities, particularly in the eastern half of the city; adjoining the western is the Phœnix Park, a noble demesne, which is, in great part, open to the citizens, and in which are located the Zoological Gardens. The Commissioners of Wide Streets have made several judicious improvements for the ornament and ventilation of the city, and at a comparatively trifling

expense, except what the imperfect state of the law forces on them, they having to go before Parliament for every new improvement.

The pipe-water service of Dublin is supplied from tanks, which communicate with the canals that cross Ireland from the west,—one on the north side, and another on the south side of the city; in the south-eastern quarter there is a third basin; all these are at an elevation of from seventy-five to seventy-eight feet above the level of low water, an altitude below that of some parts of the city; in fact, part of the parish of Grangegorman, on the north-east quarter, could not be supplied by the present service, unless with the aid of high pressure. The water contains some carbonate of lime, but not to an amount likely to be injurious to health. The main or magazine pipes are always full, but the water is only let into the service pipes for a few hours every second day. The corporation have lately put down 380 fire plugs, of a kind invented by Alderman Gavin, each of which is said to be capable of supplying ten engines. It is said 200 more will be required for the city.

Now, taking all the circumstances connected with Dublin into consideration, it might be supposed to be a comparatively healthy city,—and such it is. It appears that during the ten years ending June, 1841, during which epidemics of cholera, fever, and influenza occurred, the deaths, per annum, were 1 in 34 of the population. This is a low mortality, compared with that of most English towns. But when we compare the mortality in the city of Dublin with that of the county of the same name which surrounds it, we find the annual deaths in the latter to be only 1 in 59 of the population. The difference is, probably, not so great as at first sight it appears. A great many of the inhabitants of the county die in the city hospitals; thus, in the county there are said to have occurred, during the ten years referred to, 1431 deaths by fever, out of which only 118 occurred in hospital; whereas, of 8685 deaths by fever in the city, 6364 occurred in hospital: now, a great number of the latter were probably from the county. The deaths from fever in the county are stated to be only 1 in 978 of the population, per annum, while those from the same cause, in the city, are stated to be 1 in 269. But this is an acute disease, in which the majority of deaths occur in hospital. Consumption, on the contrary, is a chronic disease, in which comparatively few die in hospital; this proceeds from a variety of causes; the progress being so very slow, in many instances; the air of a hospital being injurious, &c. Accordingly, we find the deaths from consumption in the county not to vary

from the per centage in the city, as is the case in fever. The deaths from consumption in the county were 1 in 390; those in the city 1 in 330. It is therefore likely that the difference between the salubrity of the county and the city is not so great as the difference between the numbers 59 and 34 would indicate; but at the same time it must be remembered that many chronic cases leave the city, and die in the county; and, under all circumstances, the difference is sufficiently great to justify us in concluding, that in the city there exist certain causes in operation injurious to vitality.

Let us now turn to Mr. Wilde's special "Report upon the Deaths, Occupations, and Diseases of the various Districts and Localities of the City of Dublin, arranged according to their apparently sanitary Position, or the Classes of the Community by which they are inhabited." As a notice of this portion of the Census was promised in our review of that work in the twenty-fifth volume of the former series of this Journal, we here beg leave to state of what it consists. Mr. Wilde's division was calculated to attain results of the highest importance and accuracy, were the data at his disposal unexceptionable; and from there being no general registration of deaths in this country, and from the description of material placed at his disposal, it certainly was, we believe, the only one which could then have been made. In order to effect the objects contained in the foregoing heading, the north and south sides of the metropolis were divided into the first and second class private streets, three classes of shop streets, and mixed streets, six in all: the remaining portions of the city, the lanes, alleys, and those small streets occupied by the working classes and the very poorest portion of the community, are included in the various wards into which the city has of late been divided. To this portion of the Report are attached four very curious tables. No. 1, a "Table of Deaths, shewing by *Ages* their Amount, Locality, and *Proportion*, and the *Average Age* at which they occurred during the ten Years" over which the Census inquiry extended. No. 2, a "Table of Deaths, shewing by *Localities* their Amount and *Causes*." No. 3, a "Table of the same Deaths, shewing by *Occupations* their Amount and *Causes*." No. 4, shewing by *Occupations* and *Ages* the same deaths, in the several localities in which they occurred. A complete examination of these Tables, and the Report upon them, exceeds the limits of this review; but they are full of curious and interesting matter, and must remain, until some better registration is effected, the basis for all general medical statistics of Dublin. Among the curious results contained in Mr. Wilde's investigations, the following is worthy of notice:

In Table No. 2, under the column in which the ages at which death occurred, in the different classes of what are termed the upper ranks of life, are registered, we find that, among non-professional persons, and men of private property, the average age at which death took place was from 55 to 60; merchants, 55 to 60; among the clergy, 50 to 55; engineers and architects, &c., 45 to 50; lawyers and attorneys, 45 to 50; and medical men, of whom 112 deaths are registered, 30 to 35; and of this class no less than 47 deaths in the number registered occurred from fever and other epidemic diseases. By far the most interesting portion of this Report is that upon a table shewing by ages and sexes the burials of the city in each week during two years, with meteorological tables for the same period, from the registries kept at the Ordnance Survey Office, Phœnix Park, and the Royal College of Surgeons, Stephen's-green. From an examination of this table, which exhibits the effects of season and humidity, &c., on mortality, both as to the number of deaths, and the proportion of ages and sexes, "we learn that the months of May, June, and July, are the healthiest; and next, those of August, September, and October; but in fact those two periods of summer and autumn are so analogous, that, as far as health and mortality is affected, the year divides itself into two equal periods by the months of May and November,—the mortality of the first being to the second as 100 to 137.16. December, January, and March, are the trying seasons; and the deaths of children under five years of age predominate in November, December, January, and March." We also learn that "the deaths of the sexes vary with the seasons, the females being, in proportion to the males, least in autumn and winter, and greatest in spring."

In this most ingenious and elaborate Report there is a table, which, if free from fallacy, is decisive of the nature of the causes of increased mortality. By it, it would seem that the mortality to which we have referred, in the first class private streets, is 1 in 122.2, on the south side of the city, and 1 in 111.7, on the north; while the mortality in the poorer districts varies from 1 in 61 to 1 in 37. If these results can be relied on as shewing the actual differences of mortality between the well-housed, comfortably clothed, and well-fed inhabitants of the first class streets and squares, and the population of the over-crowded, ill-ventilated, filthy streets, which abound in the poorer districts, there can be very little difficulty in concluding, that the unhealthiness of the city, in comparison with that of the county, is due to structural defects that are capable of being amended. But Mr. Wilde

acknowledges that the data at his disposal were not sufficient to enable him to give the *actual* mortality of these several places. From the want of a proper registration of deaths, we can only arrive at probable results; it is not, however, probable that the differences of structural arrangements between Merrion-square and the Liberties should raise the number of deaths in the latter to nearly three times the per centage of those which occur in the former.

It is to be recollected that a very considerable proportion of the population of first class private streets consists of servants; these, when attacked with serious illness, are almost always sent to hospital, or remove to lodgings in poorer districts, where, if they die, they increase the apparent mortality. Besides servants, we have a separate division of the population, included in the Census under the denomination of visitors; this group is, in the higher classes of houses, usually composed of governesses, or dependents, that could not well be classed as servants, and yet do not constitute any part of the natural family. These, if ill, either return to their friends, or go into pay hospitals or lodgings, and very few of them die in the houses in which they have previously lived. Now, if these two classes of the population be subtracted, the mortality of first class houses will be considerably elevated; thus, the first and second class streets on the north side of the city are contained in St. George's and Custom House wards, which have collectively 33,062 inhabitants; out of these, in ten years, there died 4821, being 1 in 70 per annum: but if servants and visitors be abstracted from the population, the deaths will be raised to 1 in 50. In a similar manner, the first and second class streets on the south side are contained in Merrion and Stephen's wards: the united population of these are 20,192, and the deaths, in ten years, were 2370, being 1 in 84 per annum. If servants and visitors be removed, the mortality will become 1 in 52. As another modifying circumstance we must remember, that many of the higher classes, when suffering from chronic illness, remove to rural districts, or go to other lands.

Dr. Lyon Playfair considers the mortality of infants as a good criterion of the salubrious condition of a district (Report on the large Towns in Lancashire). In the English towns the greatest difference has been found to exist between the mortality of infants in the different classes of society; amongst the gentry it has generally been found, during the first year, ten per cent.; amongst trades-people, about twenty per cent.; and amongst the operatives it reaches to thirty per cent., or even

a higher number. Now, from Mr. Wilde's fourth table on the Special Sanitary Condition of Dublin, it would appear that during ten years the deaths in first class families, exclusive of the heads and of servants, were 2293; those of infants, one year and under, 528, or about one-fourth. The deaths in second class families, exclusive of heads and servants, were, during the same period, 7520; those of infants, 2015, or 1 in 3.7; and in third class families the deaths were 21,708; of infants, 5833, or 1 in 3.7. Now, when it is recollected that all the infants of the second and third class families may be considered as dying at home, while many of the elder members of the family die in hospital, the difference of these results, from what is presented by the English returns, will become still more remarkable.

There are about 29,832 children under five years of age in Dublin: during ten years 23,590 died at or under that age, giving 1 in 1.133, or about 8.8 per cent. per annum. This is below the estimated mortality at a similar age among the children of gentry in English towns; at the same time that it is strongly confirmatory of the small influence of circumstances in producing a difference of mortality among the children of different ranks. Mr. Willis's inquiries have led him to a very different conclusion: he thinks that he has ascertained that the infant mortality up to the age of two years is from thirty-two to fifty per cent. in the poorer and more crowded parts of St. Michan's parish. But under one year, at which age the mortality is confessedly much greater, it is, according to the Census, not more than ten per cent., taking the whole of Dublin; and if all the children in the city, circumstanced similarly to those in St. Michan's parish, suffer an equal mortality, none of the children of the upper classes can be supposed to die. But tables formed from data such as those employed by Mr. Willis must be necessarily very imperfect. This gentleman deserves every credit for his philanthropic efforts, but it is not by going one week to some houses in one street, and another week to some other locality, that accurate results can be hoped for. Every one that has had much intercourse with the poor and ignorant, must be aware how difficult it is to obtain a direct reply to an interrogation, especially with respect to ages and dates that have long since passed by. We have more reliance on a table of ages made out by Mr. Wilde for the Census, and which appears to have been prepared with great care. The deaths, ages, and localities were extracted from the registries kept at the various burial grounds in Dublin and its vicinity, which registries are kept with great accuracy. Now, according to this table, the

number of deaths in two years, of children under one year, amounted to 5632, being 1 in 10.58 or 9.4 per cent. per annum.

It must be acknowledged that if these calculations be accurate, they afford a very startling contrast to the results obtained in the English towns.

For the purpose of pursuing our investigation of how far structural arrangements interfere with the amount of mortality, we divided Dublin into four parts, two situated on the north of the Liffey, and two on the south. The divisions we made on the north side consisted of St. George's, the Custom-House, and Post-Office wards on the east ; and the Linen-Hall, Four Courts, and St. Paul's wards on the west. The former contain all the first and second class private streets, the first and second class shop streets, and the mixed streets, which, according to the nomenclature of the Census, are streets in which the houses are partly shops and partly private houses. The latter division contains the most crowded and filthy portion of the north of the city, and all the third shop streets. In the east, the rich and wealthy part, we found the mortality for ten years to be 1 in 50 ; in the west and vilest part the deaths are 1 in 60 !

The poor, when they get fever, are sent to hospital. This will explain the enormous discrepancy which the following facts exhibit. In the eastern wards alluded to, 1 in 88·73 die of fever; in the western, 1 in 118·4.

We have already stated that, comparatively, few consumptive patients die in hospitals. What deduction are we to draw from the following gleaning from the census returns? In the eastern wards referred to 1 in 34 are stated to have died of consumption; in the western, 1 in 40 !

Let us now turn to the south of the Liffey, and examine the comparative mortality of the rich and poor departments. The College, Merrion, St. Stephen's, St. Andrew's, and the Castle wards, contain all the first and second class private, and first class shop streets, on the south of the city, together with, at least, one-half of the second and third shop, and mixed, streets. The deaths in this locality are 1 in 5.6; those from fever, 1 in 99.69; and those from consumption, 1 in 53.27.

St. Patrick's, Audeon's, James's, and Catherine's Wards, the western and filthiest part of the south of Dublin, had a mortality during ten years of 1 in 5.4: the deaths from fever being 1 in 98; those from consumption 1 in 45.

Now, when it is recollected that it is questionable whether the hospitals are more supplied from the poorer or wealthier districts; that many of the dependents of the rich go into the

poorer districts to die, but that few are transferred from the latter into the superior quarters; and that it is usual for the affluent, when they or their families are attacked with chronic disease, to remove to the country; when these things are borne in mind, the equality of mortality which the foregoing comparison exemplifies, is very difficultly explicable; especially if it be true, that want of ventilation, want of cleanliness, and the other wants, which result from defective structural arrangements, are so detrimental to health as the evidence brought before the Health of Towns Commission would lead us to believe. It is true that in the immediate vicinity of many of the noblest streets and squares are many wretched localities; but if the proposition we have referred to be true, we should expect the salubrity of the clean and well-ventilated parts to lower the sum of mortality very considerably. Such does not appear to be the case, and we can only explain the inconsistence of this result, with that arrived at by the Health of Towns Commission, by one or other of the three following suppositions:—that structural arrangements have really very little effect in increasing mortality, and that the Commissioners have been misled by sources of fallacy, similar to those to which we have alluded in the course of the preceding paper: or that the data which we have used are fallacious; for we have no evidence on the subject bearing the appearance of authority, except the map of the Ordnance Survey and Mr. Wilde's tables of deaths; and the latter, however ingenious and elaborate,—and vast ingenuity and industry are displayed in their compilation,—cannot, as this author acknowledges, be considered as decisive, in the absence of a proper registration of deaths. Thirdly, it may be,—and the supposition is, perhaps, the most reasonable, when we remember the great difference of mortality between the city and the county,—that structural defects in the economy of a large city *have* great influence in shortening the term of human existence, but that that influence is not confined to the poor, and ragged, and ill-fed inhabitant of the cellar or garret, but that it penetrates into the dwellings of the wealthy; that the fund-holder, the barrister, and the divine, suffer from it in equal degree with the artizan or labourer: and this supposition is in accordance with the fact, quite contrary to British experience, but well attested in this country, that in all our great epidemics of fever the disease was more liable to *attack* the poor, but was *very much more fatal to the rich*(*a*).

Whichever of these suppositions be received, the subject is

(*a*) See Cheyne and Barker's Reports; and Graves's Clinical Medicine.

one of too great importance to be allowed to remain any longer in suspense; it must not be left to the unaided and desultory inquiries of philanthropic individuals to clear up this mystery, or unravel this tangled thread; it is a duty and a prerogative of governments to watch over and protect the health and food of the nations, and to our own we now resign the solution of the problem before us.

We may not, in the preceding article, have settled the influence of a single relation between the circumstances of our cities and the diseases to which their inhabitants are liable; but if we have succeeded in exciting a desire for further inquiry,—if we have shewn that the conclusions arrived at by the Commissioners for inquiring into the Health of English Towns, do not necessarily apply to the towns or cities of this island, and that legislation founded on a presumption of the general applicability of those conclusions may lead, in this country, to a waste of money, and thus impede real improvements;—if, in the opinions of our readers, we have established these sentiments, we shall have done as much as we hoped to achieve. But if it prove true, as our calculations lead us to believe, that the evils by which our over-crowded poor are surrounded do not confine their fatal influences to the proximity of their miserable dwellings, but that many a stout barrister or merchant, residing in a first-class street, is made to bow and fall under the epidemic contagion generated in the hovel; and that many an aristocratic girl droops from the consumptive tendency of an air poisoned by the prevalence of misery,—not in her own neighbourhood merely, for that we may presume to be in a square or first-class street,—but in remote and neglected districts;—what an argument will this afford for instituting such structural improvements as may be calculated to diminish this wretchedness? So much for the sanitary aspect of the subject; and as regards the economical, if Ireland is to be regarded as a vast agricultural farm for manufacturing England,—if she is to stand in a relation to her wealthy sister, like Sicily to imperial Rome,—it is, at least, worth while to feed, clothe, and house the labourers well, and to work the farm in a scientific and efficient manner. These things England has hitherto neglected; she took away our woollen manufactures, and gave us the potato; and now the leading journals of her metropolis upbraid us with our poverty. But we are willing to forget and forgive, hoping that, for the future, she will pursue a policy both wiser and more humane.

A Treatise on Fractures in the Vicinity of Joints, and on certain Forms of Accidental and Congenital Dislocations. By Robt. William Smith, M. D., M. R. I. A. Dublin, Hodges and Smith. 1847. pp. 314.

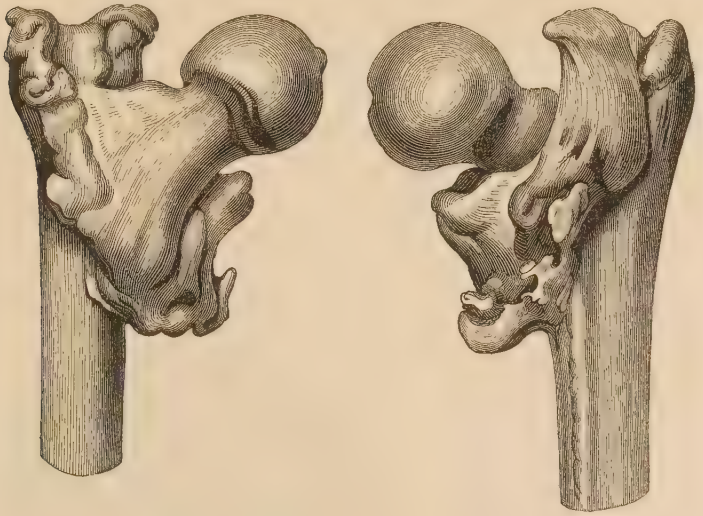
Mr. R. W. Smith is already sufficiently well known to (the reading and working part of) the profession, both at home and abroad, by his very valuable memoirs, chiefly on the pathology of bones and joints, which appeared from time to time in the former series of this Journal, as well as by a vast number of most important communications on a great variety of subjects, made to the Pathological Society, of which most useful institution he is one of the secretaries and founders. Any one of his papers would be quite sufficient to stamp his character, not merely as an able and accomplished pathological anatomist, but as an original observer, whose extensive experience, the rigid logic of his reasonings, and the faculty which he possesses in a very high degree of accurately appreciating those very minute differences on which important diagnoses often depend, justly entitle all his opinions and conclusions to a far more than ordinary share of attention and respect. More than twenty years of the most unremitting, zealous, and watchful study of disease in the hospitals of the House of Industry, and the formation, almost exclusively by the labour of his own hands, of one of the most practically valuable museums of surgical pathology in existence, are certainly qualifications for authorship such as few book-makers have to boast of. That these opportunities and endowments have not been unfruitful in valuable practical results, we shall now proceed to shew.

The scope of Mr. Smith's work is sufficiently indicated by its title; it professes to treat of the difficulties in the diagnosis of fractures and dislocations; and we but express our sincere conviction of the author's success when we say, that he has produced by far the most valuable and original monograph on a surgical subject that has ever issued from the Irish press. It is not our intention to attempt to lay before our readers anything like an analysis of the contents of the book before us, for we feel convinced that it contains nothing that could be advantageously or safely omitted, whilst the sententious brevity of the style leaves no room for farther condensation or abridgment. It is our wish to lay before the reader only a sketch of the various subjects discussed, and such extracts as may afford a fair specimen of the style and reasoning.

"On ne saurait assez insister," says Dupuytren, in his *Leçons Orales*, "sur le diagnostique des fractures et des luxations, car

on rencontre a chaque instant dans les hôpitaux beaucoup de cas qui ont échappè à la sagacité et à l'observation des grands maitres. C'est ainsi que les affections de l'articulation coxo-femorale, les luxations scapulo-humérales, les fractures de l'extrèmité inférieure du radius, et en general toutes les solutions de continuité au voisinage des articles, sont les sources de nombreuses erreurs." These words of the most illustrious surgeon of the nineteenth century form a very appropriate motto for the first part of the work before us. They concisely, but fully, explain both the nature of the subjects discussed and their practical bearing and value. Wisely avoiding the tiresome egotism of striving to send forth a complete treatise on surgery, or even on fractures and dislocations in general, Mr. Smith has spoken only of the more difficult but constantly occurring cases to which his attention has long been specially directed, and on which his own researches have thrown much additional light. The first chapter is entitled, "On the Diagnosis and Pathology of Fractures of the Neck of the Femur." It runs to 112 pages, and is the most original, complete, and elaborate in the book. The author, after giving a most graphic sketch of the general symptoms of fracture of the neck of the femur, the appearances in different positions of the patient, the occasional and most frequent causes of the accident, and the phenomena which, when present, render diagnosis peculiarly difficult, proceeds to examine the amount of shortening that takes place in fractures within, and external to the capsule; the influence exerted by the "retinacula," or cervical ligament of the femur, and by the articular capsule; the opinions of authors as to the relation of the nature of the injury to the direction of the force which caused it; and various other questions in reference to immediate and remote, as well as gradual and sudden shortening of the limb, in their bearings on diagnosis, prognosis, and treatment. He then corrects the erroneous statements of Dupuytren respecting the yielding of provisional callus, and discusses at length the opinions of Rodet on this subject, and on the diagnostic value of shortening in general. Extra-capsular fracture, fracture and communition of the trochanters, the diagnosis of intra-capsular fractures, and the mechanism and causes of secondary fractures of the femur, are next discussed, and are followed by a very complete investigation of the correctness of the opinions of authors as to the causes and diagnostic value of inversion and eversion of the foot, in the course of which Mr. Smith rescues the great Dupuytren from the imputation of an error, which, though occurring in all the editions of his lectures, is successfully proved to be a mere editorial blunder. After this we have an exposition

of the means of diagnosing impacted fracture from mere contusion of the hip; of chronic rheumatic arthritis from fracture; and of extra from intra-capsular impacted fracture; with an account of a very rare case in which the lower fragment was found penetrating the cancellated tissue of the upper. The deposits of bone which, in extra-capsular fracture of the femur, take place around the trochanters, are next described; Mr. Smith, we believe, justly concluding (though in this view he is opposed to the published opinions of Astley Cooper, Adams, Vidal de Cassis, &c.), that the direct proportion which the amount of bony deposit bears to the degree of splitting or comminution



that has taken place, together with the arrangement and usual site of the ossific masses, clearly prove these last to have been intended to effect a bony union of fractures, often entirely overlooked, traversing the inter-trochanteric space, as shewn in the annexed engravings.

In the remaining part of this first chapter, cases of fatal hæmorrhage from extra-capsular fracture are alluded to; the true nature of what has been erroneously called *partial* fracture of the neck of the femur is fully considered, and the cases of it mentioned by authors are carefully examined and shewn to be inconclusive. The anatomical characters of intra-capsular fracture are then given; the question of osseous union is fully but concisely discussed; and the changes in the head and neck of the femur consequent on old age are carefully described; after which sixty illustrative cases are detailed, and the chapter con-

cludes with a most judicious and useful summary of the conclusions to be drawn from all that has gone before. Throughout, a profusion of finely-executed wood engravings illustrate the various points discussed ; and altogether this first chapter forms, without exception, the most concise, complete, and original memoir on a surgical subject that we have ever met with. Like Dupuytren's essay on fracture of the fibula, it seems to leave little room for additions, and far less for emendation, on the part of future observers, and we have therefore preferred to leave it in its integrity, and to select our quotations, *exempli gratia*, from other parts of the work before us.

Chapter II. treats of " Chronic Rheumatic Arthritis of the Hip-joint." The affection in question is often confounded with fracture of the neck of the femur, and has been alluded to under various names by several writers on surgery ; yet, though well known to every tyro in Dublin, we have seen it constantly overlooked or misunderstood by even the best-informed surgeons of England and of the Continent. Mr. Smith enters at large into its pathology and treatment, but the following illustrations and extracts will be found to afford a tolerably correct idea of both.

" Its causes are involved in some degree of obscurity : it occasionally appears to be the result of an attack of acute rheumatism, and its origin is sometimes ascribed to falls upon the great trochanter; but in the majority of instances of this disease which have fallen under my observation, it seemed to have been of spontaneous origin, and the patients affected with it were unable to ascribe its commencement to any satisfactory or precise cause. It is occasionally met with among the higher classes of society, but is chiefly seen among the labouring poor, and in constitutions otherwise healthy. It is of much more frequent occurrence in males than in females, and is seldom seen before the age of fifty years, although a few examples of it, in individuals under thirty years of age, are occasionally met with.

" It commences with stiffness in the hip-joint, and a dull, heavy pain, which sometimes extends down the front of the thigh; the stiffness is most troublesome in the morning, but, after the patient has walked some distance, it, to a certain extent, wears off, and the motions of the joint become more free; towards evening the uneasiness and pain increase, but are relieved by a night's rest. When the weight of the body is thrown upon the affected joint, the sufferings of the patient are increased, but, as Mr. Adams has remarked, let the surgeon press on the great trochanter, or strike the heel and sole of the foot, or adopt any other expedient, so as to push the head of the bone even rudely against the acetabulum, these manœuvres are the sources of no uneasiness whatever to the patient.

" In the generality of cases, the state of the weather exerts a remarkable influence over the patient's sufferings: during wet or even very damp weather, the pain increases, and in some cases the patient can accurately foretel the approach of rain. The motions of the joint become gradually more and more limited, especially those of rotation and flexion; the latter motion becomes, as the disease advances, so confined, that the patient cannot stoop so far as to enable him to put on his shoes, nor can he sit without uneasiness upon a low chair; he always prefers a high seat, and, from the difficulty which he finds in flexing the hip-joint, he is obliged to place himself forwards on the edge of the seat, the thigh upon the affected side remaining nearly in the same line as the axis of the trunk.

" The patient affected with this disease finds difficulty in standing erect; the body is bent forwards, but, as Bell has remarked, the stoop does not form a regular curve; for, on examination, it will be found that the curvature is more or less acute at the hip-joint, and slight, comparatively speaking, in the back and loins. In fact, there is superadded to the bending forwards of the vertebral column a permanent semiflexion of the pelvis upon the femur. Gradually the limb becomes shortened and the foot everted; the apparent shortening is, however, always greater than the true, for the lumbar vertebræ become curved towards the opposite side, the pelvis oblique with respect to the spine, and elevated upon the affected side; the real shortening of the limb is, however, considerable, and frequently amounts to an inch.

"Patients suffering from this disease in its more advanced stages walk very lame, can only take short steps, and are obliged to rest at very frequent intervals. A case in which both hip-joints were affected lately came under my observation, in which the power of flexing the thighs upon the pelvis was so limited, that the old man having, with much difficulty, advanced one limb six or eight inches, was then compelled to stop until the other was brought forward the same distance.

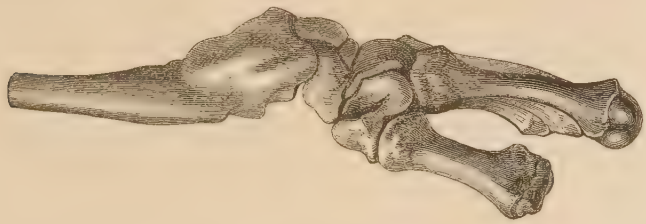
"The lumbar vertebræ acquire a great degree of mobility; the buttock of the affected side loses its natural prominence, and the glutæal fold disappears; the muscles of the hip and thigh become somewhat wasted, but remain nearly as firm to the feel as in health; it is, however, remarkable that the calf of the leg of the affected limb retains not only its firmness, but also its natural size. The trochanter major is more prominent, and *feels* larger than natural, and depositions of bone can sometimes be felt in the neighbourhood of the articulation.

"When the patient is placed in the horizontal posture, and the surgeon tries to rotate or flex the thigh, not only is much pain complained of, but, in many cases, crepitation can be distinctly felt in the articulation; the patient goes up stairs with difficulty and pain; he is obliged to make use either of one or two sticks in walking, but in general, when he moves, he can place the whole sole of the foot flat upon the ground. In some instances, the disease attacks both hip-joints in the same person, but when once established in the hip, seldom engages other articulations; it does not endanger, nor even shorten life, nor does it exert any prejudicial influence upon the general health; the external signs of inflammation are seldom present, nor have I ever known this affection to be attended with suppuration, or to result in true anchylosis."—pp. 114–116.

"It is an affection amenable to treatment in a very slight degree, and although its anatomical characters would lead us to suppose that it depended upon chronic inflammation affecting all the tissues entering into the composition of the joint, yet it is not found that antiphlogistic treatment produces any material alleviation of pain, nor is any permanent benefit derived from local bleeding or counter-irritation. Patients labouring under this affection not unfrequently present themselves at hospitals and dispensaries, in whom the entire of the region of the hip is covered with the marks of leeches, cupping, moxa, &c., but the disease has, notwithstanding, steadily progressed, totally uninfluenced by such treatment. Rest, anodyne embrocations, keeping the joint protected by new flannel or carded wool from the influence of cold and damp, together with the free and long-continued use of hydriodate of potass, combined with the compound decoction of sarsaparilla, and small doses of colchicum, constitute the mode of treatment from which I have seen most benefit derived. It is scarcely necessary to mention, that the action of the bowels should be maintained with great regularity, but it is to be remarked, that the particular affection under consideration is attended with much less disturbance of the digestive and assimilating functions than we usually observe where the rheumatic diathesis is present. The "Chelsea Pensioner" electuary answers remarkably well as a purgative

in these cases(*a*). Where the circumstances of the patient permit of it, residence in a warm and dry climate, not subject to vicissitudes of temperature, should be recommended, as well as a trial of the thermal springs either of Aix-la-Chapel, Weisbaden or Bagnéres, and Barèges. Such measures, however, are more likely to be useful in cases simply of the rheumatic diathesis, for when chronic rheumatic arthritis has once established itself, either in the hip or any other articulation, and has produced alterations of structure, it is to be feared that mitigation of symptoms, and alleviation of pain, are the utmost advantages that we can expect from treatment."—p. 128.

Chap. III. is entitled "Fractures of the Bones of the Forearm, in the Vicinity of the Wrist-Joint;" and the first form of injury that is spoken of is fracture of the carpal end of the radius, or what is commonly known in Ireland as "Colles's Fracture." As Mr. Smith remarks, it is certainly very extraordinary that, although the pathology and treatment of this injury were fully and accurately described by Mr. Colles so long back as April, 1814, not a single British or foreign author who has written since has made the slightest allusion to Mr. Colles's name in connexion with this subject, even when almost quoting his words. The fracture usually occurs at about half an inch above the carpal surface of the radius; it is generally transverse with respect to the antero-posterior diameter of the bone, but may be otherwise oblique; *the carpus is displaced backwards*, with the lower fragment of the radius, the inferior extremity of the ulna projecting in front and internally.



Mr. Smith has thoroughly studied all the questions connected with this form of fracture, and the following is his account of its symptoms:

"The fracture is usually the result of a fall upon the palm of

(*a*) "I usually prescribe this medicine according to the following formula:

R. Pulv. Guaiaci, ℥ss.	Carbonat. Potassæ, ℥i.
——. Rhei, ℥i.	Pulv. Zingiberis, ℥ss.
Flor. Sulphuris,	—— Nucis Moschatæ, ℥ii.
Supertart. Potassæ, aa ℥i.	Mel. optimi, q. s. ut fiat Electuarium.

Sumat cochl. parva duo pro re natâ."

the hand, and is liable to happen whenever a person, in the act of falling forwards, throws out before him his arms and hands in a state of extension, which he does, as it were, instinctively, to save the head and face from injury. Under these circumstances (if luxation of the bones of the fore-arm, at the elbow-joint, does not occur), from the influence, upon the one part, of the weight of the body and impulse of the fall, and upon the other, of the resistance given to the hand by the ground, the radius, which receives almost the whole force of the shock, breaks at its weakest part, that is, its lower extremity, for it is here that the cellular structure is most abundant, and the compact tissue thinnest: the carpus escapes uninjured, owing to the number of its articulations, which, as it were, divide and decompose the shock, and it is further protected by the palmar fascia, and by the numerous tendons which traverse the front of the carpus.

"Severe pain is immediately felt at the seat of the fracture; the patient is sensible of having sustained some severe injury, and is in general conscious of something having given way in the limb; he finds that the hand is powerless, that he cannot, without material aggravation of suffering, allow it to hang unsupported; and therefore the limb is usually presented to us, for examination, resting, by its ulnar margin, on the palm of the other hand, and usually in a middle state between pronation and supination. If we desire the patient to supinate the hand, he attempts to do so, and generally succeeds in the effort, but if we watch closely the manœuvre by which he accomplishes the movement, we will find that the motion takes places, not in any part of the fore-arm, but in the shoulder-joint; the patient rolls the head of the humerus outwards, and frequently is obliged to incline the entire shoulder towards the side of the injured limb, before he can accomplish such an amount of rotation as will be sufficient to supinate the hand. He finds it extremely difficult and painful to maintain the fore-arm and hand in the horizontal posture by the unaided efforts of the muscles; the fingers are usually flexed, and the neighbourhood of the wrist presents a singularly distorted appearance; the lower fragment of the radius and the carpus incline to the side of supination, while the shaft of the radius tends to the side of pronation: one fragment, the superior, is slightly drawn forwards, while the lower undergoes a considerable displacement backwards, and causes a remarkable prominence upon the dorsal surface of the fore-arm; immediately above this projection is seen a well-marked sulcus, the direction of which is generally somewhat oblique from above, downwards and inwards, towards the lower end of the ulna.

"This obliquity is seen even in cases in which the line of fracture is accurately transverse, and is owing to the double displacement which the lower fragment undergoes, and which I shall presently consider.

"The dorsal prominence extends across the entire breadth of the fore-arm, but, as might be expected, is most striking towards its radial border, and gradually sinks as it approaches the ulnar

margin of the fore-arm. Upon the palmar surface of the limb there is likewise seen a tumour, which is less prominent than that upon the dorsal aspect, but more extensive, reaching up a considerable distance along the fore-arm; it ceases below at the annular ligament of the carpus, where a deep and narrow transverse sulcus is seen, and which remains evident, even though a considerable amount of swelling has set in; these two prominences are not placed upon the same level, and, generally speaking, the dorsal is more evident and striking than the palmar, for in the latter direction the swelling is usually greater, and the form of the tumour not so circumscribed. This want of correspondence between the anterior and posterior projections is one cause of the appearance of obliquity which so many of these cases present.

"The lower extremity of the fore-arm assumes a rounded form; its antero-posterior diameter is increased, but though there may be some, there is by no means a corresponding diminution in its transverse measurement; the alteration in the latter direction is much

more marked when the fracture engages the body of the bone about two or three inches above its lower extremity; it depends upon the

displacement, towards the ulna, of the upper end of the lower fragment, the fracture being in general above the pronator quadratus muscle, the influence of which is then, of course, exerted upon the inferior fragment alone. The interosseous interval, however, in the situation of Colles's fracture, is so narrow, that the deformity arising from this cause is very slight, and the diminution in the transverse diameter of the fore-arm scarcely perceptible.

"The convexity of the ulnar edge of the fore-arm is slightly increased, but when the eye is cast along the radial margin of the limb, the latter is observed to present a double concavity, one (supposing the arm to hang by the side) directed forwards, the other

outwards: the head of the ulna is thrown forwards, and projects at the ulnar border of the carpus.

"The most usual seat of the fracture is from three-quarters of an inch to one inch above the radio-carpal articulation; sometimes it is only a quarter of an inch above the joint, but I have never seen it higher than one inch: it always *appears* to be higher than it really is; but should the lesion of the bone take place at two inches or two inches and a half above the radio-carpal articulation, the injury no longer presents the peculiar and remarkable characters which distinguish Colles's fracture of the radius.

"It has been lately asserted that, in cases of fracture of the carpal end of the radius, there is a palpable shortening of the bone. Monsieur Diday has maintained that, in these cases, the fracture traverses the bone obliquely from above downwards and forwards, so that the lower fragment being carried backwards, overlaps the superior, and that thus shortening of the entire bone is produced(*a*). This opinion is correct only to a certain extent; the fracture is very rarely, indeed, so oblique as to admit of one fragment riding upon the other; indeed, in the great majority of cases, the lesion of the bone is transverse: even were it otherwise, it is difficult to conceive how such an amount of overlapping of the fragments as would produce an appreciable shortening of the bone could occur, as long as the ulna and the inferior radio-ulnar ligaments remained entire.

"But although I believe that the overlapping of the fragments in consequence of the obliquity of the fracture remains to be proved, I admit that there is generally shortening of the radius, even in cases where the fracture is directly transverse; but in consequence of the peculiar mode of displacement of the lower fragment,—a displacement which directs the carpal surface of the bone backwards instead of forwards, and upwards instead of downwards,—a displacement in which the carpal fragment undergoes a 'mouvement de bascule,'—the shortening is confined to the posterior surface of the bone: the anterior, so far from being shortened, sometimes measures even more than it did previous to the occurrence of the accident, although certainly, it must be confessed, that to detect this increase the utmost possible nicety of measurement would be requisite.

"The anatomist is well aware that, in the normal radius, the posterior surface of the bone is longer than the anterior; either the reverse is the case, when the radius is the seat of Colles's fracture, or else the surfaces are found to be of equal length. In a healthy radius which now lies before me, the posterior surface measures nine inches and a half, the anterior nine inches and a quarter, while in two specimens of the fracture which are also before me, the posterior surface of the bone, in one, measures eight inches, and the anterior eight inches and a half; and in the other the surfaces are each eight inches in length.

"(*a*) *Archives Générales de Médecine*, Février, 1837."

"When pressure is made immediately below the head of the ulna, considerable pain is produced, for the internal lateral ligament is put upon the stretch by the displacement of the carpus and lower fragment of the radius. The patient fears to move the wrist, and has altogether lost the power of pronating and supinating the hand. If the surgeon, grasping the hand, imparts the motion of rotation to the radius, previous to his having reduced the deformity, he may possibly find that the head of the radius (strange as it may appear) revolves upon the ulna, and he certainly will generally fail in eliciting crepitus, and may be thus led to make an incorrect diagnosis; but if a degree of extension, sufficient to restore the fragments to their proper relative position, be first employed, and the hand then rotated, the grating of the broken surfaces upon each other will be felt, and the head of the radius will be found to remain motionless.

"The hand is in general slightly flexed, and the lower fragment of the radius, along with the carpus, besides being displaced backwards, is also drawn towards the side of supination, and this twofold displacement causes the wrist to assume a singularly twisted appearance, such as might be supposed to result, were it possible to supinate the hand and wrist, the fore-arm being at the time fixed in a state of pronation. Dupuytren and others have described the hand as being in a state of abduction, but this statement is not strictly correct, for the hand is displaced outwards, along with the carpus and lower fragment of the radius, 'par un mouvement de totalité.' Severe pain is experienced by the patient when pressure is made in the situation of the fracture, and if tumefaction has not yet set in, the finger can in general detect an inequality in the bone.

"This fracture is quickly followed by a considerable amount of swelling; effusion occurs rapidly among the tendons which cross the front of the wrist-joint, obscuring the characteristic features of the injury, and rendering the diagnosis difficult in proportion. Three weeks usually elapse before the bone is united, but a much longer period must pass over before the motions of the hand and fingers are perfectly restored, and this hap-

pens even in cases which have been skilfully treated, and where no deformity remains. This sequela of the injury is a source of great inconvenience to the patient and of annoyance to the surgeon, who is often unjustly blamed for its occurrence: the practitioner will, therefore, act with prudence in warning his patient, at the commencement of the attendance, that stiffness of the wrist-joint, and an incapability of flexing the fingers during a period of several months, are by no means unfrequent results of a fracture of the lower end of the radius.

"Generally speaking, the diagnostic signs of this injury are clearly marked; and, in the great majority of cases, the observation of Pouteau obtains, that there is no fracture the existence of which it is more easy to tell at a single 'coup d'œil.'"—pp. 134–140.

Passing over an elaborate description of the anatomical characters of "Colles's Fracture," and several discussions respecting disputed points in its characteristics and history, as well as an account of some other forms of fracture of the carpal end of the radius, and of the radius and ulna close to the wrist-joint, with their differential diagnosis and treatment, and the summary which concludes the chapter, we have, in the beginning of the next section, a very full description of fractures of the greater tuberosity of the humerus, their pathology, diagnosis, and treatment, together with several illustrative cases. All these, however, we are compelled to leave altogether unnoticed, in order to make room for an extract descriptive of certain forms of injury by no means well or generally understood, viz., "Impacted Fractures of the Neck of the Humerus."

"The diagnostic signs of fracture of the neck of the humerus, accompanied by penetration of the superior by the inferior fragment, are remarkably obscure, and the true nature of the injury is exceedingly liable to escape detection: there is but little deviation from the natural form of the shoulder, nor is there any *appreciable* alteration in the length of the limb; when the surgeon places one hand upon the shoulder, and with the other rotates the elbow, the head of the bone will be felt moving with the shaft; no satisfactory information is obtained by examining through the axilla, for although, perhaps, a slight irregularity may be felt near the junction of the neck with the head of the bone, it is usually so inconsiderable, that it cannot be looked upon as affording positive evidence of the existence of a fracture in this situation.

"When, however, a person falls upon the upper and outer part of the shoulder, and at once loses the power of executing the motions natural to the articulation, when none of the characters of luxation, or of the ordinary fracture of the neck of the humerus are present, and where, at the same time, there is a certain degree of deformity, which, though slight, it is by no means easy to remove, and an unusual difficulty in detecting crepitus, we have grounds for suspecting the existence of an impacted fracture of the neck of the bone. It is not easy to say in what

the deformity consists, but when the surgeon compares the two shoulders with each other, it at once becomes obvious that there is a difference in their external conformation, that which has sustained the injury appearing to be somewhat fuller and larger than its fellow.

" In order, however, to form a more decided opinion as to the nature of the lesion which the bone has suffered, let the surgeon, with both hands, grasp the head of the bone with firmness sufficient to maintain it as nearly as possible in a fixed position, while an assistant rotates the elbow; by this method crepitus can be produced in the great majority of cases.

" In the ordinary fracture of the neck of the humerus, which is unattended by impaction, it is sufficient, in order to detect this characteristic sign of fracture, that the surgeon place one hand upon the shoulder, and with the other rotate the arm. In cases, however, of impacted fractures, we would derive no information from such a mode of examination; but we will seldom fail in our efforts to produce crepitus, if we adopt the method which I have mentioned, for the impaction is never by any means as firm in these cases as in the analogous injuries of the neck of the femur, inasmuch as it rarely happens that the entire of the lower fragment penetrates the head of the bone.

" The annexed engraving shews the relative position of the frag-

ments in the majority of cases of this form of impacted fracture. It represents a vertical section carried from before backwards, through

the upper extremity of the left humerus. The direction of the fracture is transverse, and its situation nearly corresponds to the line of junction of the epiphysis with the shaft. The inner and posterior portion of the head of the humerus has been driven downwards, and the compact tissue lining the concavity of the neck of the bone has penetrated the reticular structure of the head to the distance of half an inch, and here consolidation has taken place by the direct union of the surfaces opposed to one another, while in front, where there is no impaction, the fracture is united by the deposition of bone in the ordinary manner.

"In the second form of this remarkable injury, the fracture is situated higher up, and traverses the anatomical neck of the bone, *within* the inferior attachment, or base of the capsular ligament. It is a true intra-capsular fracture of the neck of the humerus, in which the head of the bone, or superior and smaller fragment, is driven into the inferior, or larger, between the tubercles, one or other of which processes are usually broken off from the shaft. It is thus analogous to the *extra-capsular* impacted fracture of the cervix femoris, with fracture of the trochanter; while the former variety, in which the fracture is external to the capsule, and immediately below the tubercles, is analogous to the *intra-capsular* impacted fracture of the neck of the femur, in which the inferior fragment penetrates the head of the bone.

"The diagnosis of this, the *intra-capsular* impacted fracture of the neck of the humerus, is simple as compared with that of the *extra-capsular* variety of the injury, in which the inferior penetrates the superior fragment.

"The arm is slightly shortened, the acromion process projects more than natural, and the shoulder has lost, to a certain extent, its rounded form; the upper extremity of the shaft of the humerus is approximated to the acromion, and the entire of the globular head of the bone cannot be felt. In consequence of the fracture of the tuberosity, crepitus can be readily detected, when the shoulder is grasped with moderate firmness, and the arm rotated. The absence of a rounded tumour in the axilla, and the impossibility of feeling the glenoid cavity, are sufficient to enable us to distinguish this injury from luxation. With the ordinary fracture of the surgical neck of the humerus it would be scarcely possible to confound it, for in this injury the elbow is separated from the side, an evident depression exists two or three inches below the acromion process, the upper end of the lower fragment projects towards the axilla, and the axis of the arm becomes oblique from above and within, downwards and outwards.

"Both forms of impacted fracture, to which I have alluded, unite by bone; were it not, however, for the circumstance of the impaction, we would scarcely hope for osseous consolidation in the intra-capsular variety. In fact, were it not for this fortunate circumstance, the neck of the humerus would be in a more unfavourable predicament, as regards the occurrence of osseous union, even than the neck of the femur when broken within the capsular ligament. In the latter case, the

superior fragment continues to be supplied with blood in quantity sufficient, not only to preserve its vitality, but also sufficient, in many cases, for the accomplishment, at all events, of ligamentous union; but in the former the superior fragment is cut off from all connexion with surrounding tissues, it has no round ligament to conduct vessels into it from above, it becomes, truly, a foreign body in the articulation, and would be likely to perish from want of nutrition, were it not, by the impaction, brought and maintained in contact with living structures and highly organized tissues, capable of forming and depositing osseous matter, by which the fracture is repaired."

The physiological and practical remarks which follow are of great interest and importance, but we have not room to quote further. The combination of fractures of the tubercles with the lesion above described, alterations in the head of the bone, separation of the superior epiphysis of the humerus, &c., are successively considered, the symptoms and diagnosis given, and the degree of deformity likely to remain, together with the pathology and treatment, are very carefully entered into, Mr. Smith correcting, *en route*, some very absurd errors which great surgeons have been guilty of in speaking of these affections.

Chap. V. treats of fractures of the acromial end of the clavicle, and concludes the subject of fractures. The next chapter is a very curious and interesting one, on a most remarkable and rare form of dislocation of the bones of the foot. We have then two chapters on congenital luxations of the wrist and shoulder-joints, with the means of diagnosis from the fractures which they most closely resemble, and an examination of the opinions of pathologists on the nature and causes of these curious affections. The ninth chapter is on dislocations of the lower jaw, their pathology, symptoms, and treatment, the consequences of non-reduction, and the diagnosis from deformities produced in chronic rheumatic arthritis of the jaw. This paper is the only complete article on luxations of the jaw that we have yet met with, and the admirable engravings of the appearances presented during life by this form of injury are, we are inclined to believe, the only ones yet published. A supplemental chapter, written whilst the work was passing through the press, contains some additional observations on fractures of the radius, dislocations of the bones of the foot, and congenital luxation of the wrist-joint. The volume is furnished with three elaborate indices, for more convenient reference to the contents; each chapter, as we have already said, being also terminated by a string of propositions containing the conclusions to which it leads. These facilities for study cannot be

too strongly recommended to the imitation of authors on all subjects of research and difficulty, like that of the diagnosis of disease.

Altogether, we have no hesitation in stating that Mr. Smith's work is undoubtedly the most important addition to the literature of surgical science with which we have been presented for many years. Replete with novel, accurate, and most valuable information on some of the most obscure and difficult points of every-day practice, well-arranged, and written in a style as concise and graphic as it is precise and easy to be understood; we are very much mistaken, indeed, if it do not at once take its place among the most standard and approved treatises on practical surgery. The typographical characters of the work are of the very first order, and reflect great credit on publishing enterprise in this country. The illustrations, which amount to nearly two hundred, are mostly by Hanlon, from the splendid drawings of Conolly, and are fully worthy of the reputation of both these distinguished artists. In short, we have never had to notice any surgical work in which there was so much deserving of the highest praise,—so little that we would wish to see changed or curtailed; and we therefore recommend in the strongest terms, both to the student and to the surgeon engaged in practice, Mr. Smith's treatise on Fractures and Dislocations.

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1. *The Potato Plant, its Uses and Properties; together with the Cause of the present Malady, &c.* With ten lithographs. By Alfred Smee, F.R.S., &c., &c. London, 1847. 1 vol. 8vo., pp. 174.

2. *The Prevention and Treatment of Disease in the Potato and other Crops.* By John Parkin, M.D., &c. London, 1847. pp. 84.

3. *On the Disease in the Potato Crop.* By Edward J. Cooper, Esq. From the Proceedings of the Royal Dublin Society. 1846.

4. *On the Effect of Electricity on the Potato Crop.* By James Swan, F.R.C.S.I. From the Proceedings of the Royal Dublin Society. 1847.

We make no apology to our readers for again recurring to the subject of the potato disease. The loss of that vegetable, as an article of diet, if we confine our consideration to the *pre-*

sent bearing of the question, has been the source of innumerable evils to our ill-fated island. We leave the inquiry as to the prospective benefits to be derived from its total abolition to the pounds-shillings-and-pence investigation of the political economist; enough for the practical physician to know that famine and destitution have been its immediate consequences, and that disease and death are close following in their wake.

In the first Number of our New Series we directed our attention to the pathology of this vegetable epidemic; and as then, so now, the importance of the subject,—not the value of the treatises, the titles of which are prefixed,—induces us to offer a few observations on the cause and treatment of the disease.

The various theories which have been broached as to the cause of the epidemic, may, as Dr. Parkin observes, be reduced to three, to which he has added a fourth: "The first being that which ascribes it to constitutional debility, caused by over-cultivation, or the wearing out of the races; the second, to the generation of fungi, or parasitical and other insects; the third, to an alteration in the seasons, or to some particular but inappreciable change" (electrical) "in the constituent elements of the atmosphere;" and the fourth (Dr. Parkin's), *to a cause in constant operation in the bowels of the earth, to which the term "volcanic action" has been applied.*

That the disease is not produced by the first of these causes is sufficiently evident from the fact of the newest varieties,—even those raised from seed,—being affected. Of the second cause, so far as relates to the generation of fungi, we have, in the article already referred to, given a very decided opinion, and one which we are not disposed either to qualify or retract. But with respect to insects, or rather the statement of Mr. Smee,—"that the *Aphis vastator* has been the sole cause of the disease," an opinion which has caused its propounder, the surgeon to the Bank of England, &c. &c., to give to the world a book of 174 pages, with ten lithograph plates,—we would merely say, that this insect has been met with in a few instances only, while the brown fungus has been in no case absent.

That an alteration in the seasons is not the cause of the potato disease, the experience of the two years, 1845 and 1846, in which it has so universally existed, proves beyond dispute, inasmuch as neither of these years was peculiarly distinguished, either as respects temperature or the quantity of rain which fell; and, moreover, they differed much from each other. The effect of electricity, as the cause, has latterly be-

come a very popular idea, and is fully adopted by Mr. Cooper in his paper, which was read at an evening meeting of the Dublin Society this winter. He bases his opinion on the fact of the very great prevalence of thunder storms, amounting to ten in four months, in the year 1846; while the average number, as shewn in the observations at his Observatory at Markree, a table of which is given, has been, for six months, during twelve years, three, and never exceeded seven; but on reference to this table we find that in the year 1845, when the potatoes were nearly equally affected, the number amounted only to three, a fact which seems to have altogether escaped Mr. Cooper's attention, and which, we think, is a sufficient answer to the electricians.

It only remains for us now to notice Dr. Parkin's cause,—volcanic action. Dr. Parkin refers to this cause not only "the production of epidemic diseases among men and animals, but the blights and pestilences which affect the vegetable creation." When the Asiatic cholera raged in Europe he published a work on this *wonderful* discovery of his; and we find him now again rushing into print to tell that he "has inferred that the cause productive of the one disease is the same as that which produces the other," namely, that of the potato. He does not, to our satisfaction, at all prove this conclusion, and we no more believe now than we did when we read his work on the cholera, that he has proved even the *existence* of this volcanic agency, much less its influence.

What, then, is the *remote* cause of this vegetable epidemic? (We have already stated our belief that the *proximate* cause is the generation of a peculiar fungus). This is a question which, we think, has not been yet satisfactorily answered; nor do we think that the present state of our knowledge admits of a satisfactory answer. We may, of course, conjecture, as others have done, but we are not in a position to prove the truth of our conjecture. And we feel that we do not throw any additional light on the subject in stating our belief, that vegetable as well as animal epidemics are due to some *unappreciable* change,—whether electrical, volcanic, chemical, or any other we have no proof,—in the atmosphere with which our globe is surrounded.

Let us now turn our attention shortly to the prophylactic treatment of the epidemic, or that which should be adopted to prevent a recurrence of the disease. The remedies proposed with this view are, of course, chiefly based on the different theories which exist as to the cause, and, as may be supposed, are very numerous.

In the first place, all practical men agree that none but sound potatoes should be employed as sets, although there are some instances recorded in which a healthy crop was procured from diseased sets. Some, however, go further, and express their belief that the only chance there is of completely destroying the epidemic influence consists in raising potatoes from seed, and no longer propagating them from any of the varieties at present in cultivation. With the former recommendation we most heartily concur, but not with the latter ; for, as we have before stated, evidence exists that even potatoes raised from seed do not always escape the ravages of the malady. We would, however, refer our readers to some interesting remarks on the method of saving the seed from the potato apple, and the manner in which it is to be sown, &c., contained in the Proceedings of the Royal Dublin Society for 1846 and 1847, in letters received by Mr Hogan, a member of the Society, from M. Göringer of Rippoldsau.

Of the various prophylactic plans described in the treatises, the titles of which are prefixed to this article, that of Dr. Swan is especially deserving of attention. It is as follows:

"Having read an account of the application of electricity as a stimulant to the growth of plants, by Dr. Foster and others, I, early in April last (1846), marked off in my garden (a rich, loamy soil) an oblong plot of ground, due north and south, containing twelve ridges of the usual width. Into the four corners of the plot I drove wooden pegs, and had a fine iron wire stretched from peg to peg, and buried six inches under the surface, so as to surround the plot; poles, eight feet high, were then placed in a line due north and south, seven yards apart, down the centre of the plot, and a wire carried from the centre of the buried wire on the north, over the top of the poles, and attached to the centre of the buried wire on the south side, and left to collect the electricity of the atmosphere, and convey it to the plot beneath.

"The ground was planted, about the 20th of April, with early Scotch Red Potatoes, *without manure,* and twelve ridges to the east planted with the usual quantity of mixed manure. Both seemed equally healthy and luxuriant in the month of July, from which I quite lost thought of them, owing to the total destruction of the rest of my potato crop, until the end of November, when, to my utter astonishment, a better or more productive crop of *sound*, *mealy*, *large* potatoes, *without the least appearance of rot*, I never saw dug, though nine of the twelve manured ridges outside the enclosure *were totally destroyed*, the three next it having a few small sound Potatoes."

Were we disposed to be hypercritical, we might, perhaps, observe, that the *absence* of manure had as much to say to the soundness of the potatoes in this experiment, as the *presence* of

the electricity; but the plan is one that deserves to be tried on a larger scale, and we should therefore be very loath to discourage its repetition.

Mr. Cooper's proposal differs but little from this; he intends to experiment on this year's crop—

"By placing poles, with copper tractors attached to them, in the field, at various distances from one another, taking sixty-four to the English acre for the greatest number, leaving them ten yards apart; and trying the experiment on the other acres with a less number."

Mr. Smee seems rather at a loss when he comes to consider how this "sad rover" of his, the *Aphis vastator*, is to be got rid of, or its ravages stopped.

"The *little rascals*," he says, "crawl into chinks and crannies, from which they come forth at their convenience, and rapidly multiply."—p. 139.

"The best means is to pick off the insect when we desire to protect a single plant; to pull off affected leaves, or to sprinkle them with quicklime, when we wish to protect a larger number of plants. We should endeavour to get our produce ripe at an early period, by using early kinds, and by planting early, perhaps even in autumn. We should protect lady-birds, ichneumons" (two species of insects which the author describes as preying on the aphis), "and soft-billed birds; and we may try the effect of ducks to gobble up the parasites."—p. 142.

This grave proposition strongly reminds us of the French quack's "poudre that killee the fleæ."

Dr. Parkin, looking on the cholera epidemic and the potato epidemic as similar, is of opinion that the same treatment should be adopted for both; and having, in his Treatise on the antidotal Treatment of Cholera, to which we have already referred, asserted that carbon and its compounds were unfailing specifics for that malady,—an assertion, the truth of which very few, if any, believed,—he now claims the same virtue for the compounds of this elementary body in the prevention of the vegetable pestilence. Finding a difficulty, however, in the application of the remedy he proposes, directly to the plant, especially in extensive fields or districts, he recommends farmers—

"To spread chalk over the land first, and add salt subsequently, throwing it broad-cast over the field, for autumn-planted potatoes; but in the late or spring-planted varieties the chalk should be powdered and the salt mixed with it before being added to the soil."

The object here is to effect a slow evolution of carbonic acid gas during the growth of the plant, and thereby to counteract the influence of the volcanic emanation which Dr.

Parkin believes to be the cause of the disease. The proportions of each which he recommends are about four cwt. of salt, and from thirty to thirty-two cwt. of chalk, finely powdered, to the English acre: if slaked lime, which has been sufficiently exposed to the air to be converted into a carbonate, be employed, he thinks that from fifteen to sixteen cwt. would be sufficient. Dr. Parkin prefers carbonic acid thus procured to the use of charcoal; the difficulty of procuring a sufficient supply of the latter, as also its tendency to absorb other gases, and thus become inert itself, are his chief objections to it. Where, however, the process above detailed would be too expensive, he suggests the use of charred peat or saw-dust, wood and vegetable matter partially carbonized, charred sea-weed, and other substances in a charred or half-burned state, in the form of manure. He thinks that from fifty to sixty bushels of powdered charcoal would be required for each acre, and, of course, a much larger quantity of any of the other substances.

Notwithstanding any means that may have been employed, should the epidemic attack the crop, and the evidences of its ravages be observed in the stem and leaves, Dr. Parkin advises the extrication of carbonic acid gas into the atmosphere, by burning stubble and other dry combustible matter to the *windward* of the field or the spot where the tainted crop grows; a remedy which, whatever view may be taken of the disease, must, we think, prove serviceable.

We have now laid before our readers, as concisely as we could, some of the most recent opinions which have been published on the cause and treatment of the potato disease. Of the means for its prevention which have been proposed, we would ourselves be inclined to place most reliance on the electrical treatment of Dr. Swan and Mr. Cooper(*a*), but we have thought it right to give an account of the others also.

Our chief object, however, in writing this review, has been to try and excite an interest in our medical friends residing in the country, in the investigation of this epidemic. Interested enough we know they have been,—and sad reason too many of them have had to be so,—in its effects; but we are anxious that such of them as are favourably circumstanced for so doing, should carefully experiment, during the present year, on the various methods proposed, and afterwards publish their results. Were even ten physicians, in different parts of Ireland, to follow our suggestion, we are sanguine enough to believe that

(*a*) Sir James Murray, of this city, was, we believe, the first to propose the use of electrical conductors for the prevention of both animal and vegetable epidemics.

neither the cause nor the treatment of this vegetable malady would be any longer a mystery.

We do not propose an undertaking any way foreign to the domain of medical science; the truth of medicine is essentially based on observation, and the practising physician is every day, almost every hour, of his life, continuously engaged in the investigation of disease, its causes, and its treatment: who, then, so well suited to investigate the origin and prevention of an epidemic disease, whether vegetable or animal?

Medicines, their Uses and Mode of Administration, including a complete Conspectus of the three British Pharmacopœias, an Account of all the new Remedies, and an Appendix of Formulæ. By J. Moore Neligan, M. D. M. R. I. A., Licentiate of the College of Physicians of Ireland, &c. Second Edition. Dublin, Fannin and Co. 1847. pp. 485.

The appearance of a second edition of this work shews that we were not mistaken in the opinion which we expressed, in our former series, of its great intrinsic value. Its success at this period, when so many excellent works, with a similar object, are daily issuing from the press, is a confirmation of the truth of our original appreciation. The public judgment is usually right in the main; it can well distinguish not only between the ephemeral productions of those who write merely for notoriety,—the fools who print their crudities through vanity, and the knaves who, like the hydropathists and homœopathists, seek to pass their false counters by infusing into thousands of them a single grain of truth,—but it can likewise detect distinctions between works of real merit. It can perceive that some are valuable as containing records of observed facts; these works are studied by many, and placed upon their shelves as authorities to draw from: it can perceive that some, devoted to speculation, present vistas through which, if the collector cautiously proceeds, he may find many beautiful although unrecorded truths; these are likewise treasured: and it discovers among the host of compilations which are daily presented to its attention, some that are meagre and *jejune*; others that are learned but unwieldy; and a few that are exactly adapted to its wants, and are calculated to meet its hourly necessities. These are eagerly sought after and treasured; and among them we feel justified in placing Dr. Neligan's useful treatise.

"Medicines, their Uses and Mode of Administration" having become a standard work, and its utility being acknowledged by those whose wants it was intended to supply, as adequate for that purpose, it is now placed in a position above criticism. It is vain for the reviewer, himself, perhaps, an unsuccessful candidate for public favour, to put himself in opposition to the general judgment; or, that which is more ridiculous, to take on a patronising air, and recommend a work already stamped with general approval. We are, we confess, proud that our original appreciation of Dr. Neligan's work has been confirmed by the voice of the profession in Ireland, Great Britain, and America. But we shall not attempt to criticise it, but merely recommend others to learn from its pages any novel facts that may be of practical utility.

"Among the new medicines described," says the preface, "may be enumerated: valerianic acid, the valerianates of zinc, of quina, and of iron, gallic acid, matico, sulphate of manganese, hyposulphate of soda, acid nitrate of mercury, oxalic acid, chloride of carbon, medicinal naphtha, the arseniates of ammonia and of quina, the bromides of potassium, of iron, of barium, of calcium, and of mercury, chloride of silver, Bebeerince, &c. And of the new preparations may be mentioned: Carrara water, the tincture of castor oil, fluid extract of senna, Filhol's caustic, Goudret's ammoniacal blistering ointment, ergotin, digitalin, cetraric acid, amorphous quina, fer réduit, pills of iodide of iron, &c."

We have glanced over these various additions to the present re-issue, and if we had space we should rejoice in impressing the valuable facts contained in them on our own memory, by extracting them into our pages. To our readers, however, our inability to do so can be no privation, for we look on it as a matter of course that every practical man will forthwith have a copy of Neligan's work on his study table. He will require it as a work for constant reference, for doses, for new formulæ, and for the *uses* of new medicines; and, such being the case, we feel it unnecessary to prolong the present notice. Before we conclude, however, we cannot but commend the neat typography and excellent paper of this edition. Our publishers are deserving of commendation for their spirited efforts towards the improvement of their proper department.

We rejoice to hear that the Irish College of Physicians have determined on issuing a new edition of their Pharmacopœia. The last appeared in 1826. We trust the work will equal its predecessor; but great labour, research, and knowledge, not only in British but in foreign scientific literature, will be required, to bring it up to the high standard which the present state of Materia Medica requires.

Observations on the Nature and Treatment of Pulmonary Consumption. By Thomas Woods, M. D., &c. &c. Parsonstown, Shields and Son. 1847. pp. 95.

We have received this work with great satisfaction, not on account of its merits only, but from its furnishing honourable evidence of the attainments and character of our provincial physicians, so many of whom have already added to our medical literature. Of their ability to do so we can speak from an extensive personal knowledge, and also from evidence more unexceptionable; for we need not travel out of the pages of this Journal to shew that some of the best communications in medicine and pathology have emanated from our country brethren, in our former series; and the same might be said of the other leading periodicals of the day.

It might seem invidious to name those gentlemen resident in the country whose researches have justly earned for them a high reputation in the schools of Great Britain, America, and the Continent; and we shall content ourselves with saying, that we are acquainted with no country in which there is to be found a greater proportion of highly-educated men filling provincial appointments, nor a body of practitioners whose zeal, charity, and courageous devotion are more deserving of public gratitude.

Dr. Woods' work differs essentially from the ordinary class of books which are continually appearing on the subject of consumption: it is no advertisement of the author's peculiar success in treatment, no proclamation of an imaginary specific. It is the production of an observing, reading, and thinking man; and, whatever opinion may be formed as to some of his views, we must allow him the credit which is due to all sober investigators of a difficult subject.

Dr. Woods dwells strongly on the error, still too general, of considering consumption as merely a disease of the lung, characterized by the deposition of tubercle into the structure of that organ, insisting that the essence of the disease is the altered condition of the entire economy, previous to the anatomical change. To this view the minds of pathologists have been long inclining; and, although the merit of complete originality cannot be awarded to this author, still we are glad to see it strongly put forward by a practical physician. Strictly speaking, consumption is not a disease of the lung, but one in which, from causes still hidden, this organ is the first, or generally the first, to exhibit anatomical changes. But the disease is of the system generally, and when this opinion shall be

more extensively admitted, medicine will lose one of its greatest opprobria, namely, the unavailing attempts to cure phthisis by remedies directed to the lung alone; and then we shall see fewer consumptives tortured at an incurable stage of their disease by the cruel seton, the disgusting issue, and the unavailing blister: and though treatment may not be successful, it will be at least innocuous.

Assuming the existence of a tubercular plasma in the blood, previous to the deposition of tubercle, and adopting the chemico-physiological views of the present day, Dr. Woods puts forward the opinion that the deposition of tubercle in the lung is an effort of the *vis medicatrix naturæ*, its object being to obclude the entrances by which oxygen is absorbed, and thus delay the waste or combustion of the weakened system.—An ingenious view, which might be met by the argument, that the more tubercles the patient had the better. This objection is, however, anticipated by the author, who remarks that, to understand the good that is accomplished, the attempt must be considered in the commencement.

"If the alterations produced by the three most marked diseases of debility,—consumption, chlorosis, and scrofula,—which may be taken as types of all the others, be examined, it will be found, that in the first the amount of oxygen is lessened by filling up the lung; in the second the same object is accomplished by decreasing the number of globules; and in scrofula, Andral has shewn that the functions of the liver are morbidly active; the liver itself, instead of becoming, as is usual, atrophied by age, retaining the size and appearance it possessed in infancy. In some diseases these three resources are made use of together: in phthisis, for instance, the scrofulous liver is frequently met with, the blood globules are diminished (Gavaret and Andral), and lastly, the air cells are occluded by tubercular matter; nature, as it were, adopting each measure as occasion forces her, commencing with an increased secretion, and ending with the desperate attempt at partial destruction of an important viscus."

We confess that the *vis medicatrix naturæ* has never been a great favourite of our's: we have always considered it somewhat in the light of an amateur physician, and, like many of that class who demand no fees, sometimes over-officious, often neglectful, and generally theoretical. Besides, we cannot be sure of finding this physician at home, for it is difficult to understand the efforts of nature when the system is in an unnatural condition, unless we assume this *ens* or *vis* to be itself incapable of disease.

It must be left to future times to determine how far we may adopt these opinions of our author, objections to which we can easily anticipate. In the mean time we may safely adopt the

general rules of treatment which he has proposed, inasmuch as they are nearly those which the experienced physician generally follows; yet in our attempts to increase the biliary secretion, care must be taken not to encourage any return to the Abernethian heresy. The author has some excellent observations on the effects of light as a preventive and remedial measure in consumption: they are well worthy of careful study, and very interesting when we recollect the influence of light on the development and health of plants and the inferior animals.

In connexion with this subject Humboldt observes, speaking of the South American tribes in the equinoctial regions, where the state of nudity exposes the surface of the body, from the earliest ages, to a strong light, that he never met a case of natural deformity; and remarks, that these deviations are infinitely rare in tribes whose dermoid system is strongly coloured. And Edwards dwells on the fact of the frequent development of scrofula among the children who inhabit the more narrow and dark streets of Paris; and observes, that to consider the eyes as merely organs of vision may possibly be erroneous. They may, according to him, serve to transmit the action of light to the whole economy, it being evident that its influence is not confined to the merely visual sensations, as every one must admit who has observed its effects in aggravating the symptoms of many acute diseases.

We can safely recommend the perusal of Dr. Woods' volume to the profession. We only wish that his views and principles were more extensively acted on.

Practical Observations and Suggestions on Medicine. Second Series. By Marshall Hall, M. D., F. R. C. S. L. and E., &c. Small 8vo. London, Churchill. 1846. pp. 360.

We have not the most remote intention of entering into the Marshall Hall discussion. The subject has already, in other works, been worn completely threadbare, and it would be as useless as uninteresting to our readers. The merits of Dr. Hall's discoveries are almost unquestioned abroad; but at home, and in his own city, personal considerations, not necessary to mention, seem to have had a great influence in delaying their full recognition. In this, however, there is nothing extraordinary. Inventors and discoverers are first assailed with the cry that what they have discovered or invented is not true; and when they have got rid of that objection, they are next told that it is not new: it is only after half a century has elapsed that the question is asked, was the knowledge, the novelty and

originality of which is thus impugned, previously either appreciated or applied to any useful purpose? This is almost invariably the case in the progress of human knowledge, and the reason of it is very evident. To claim an important invention or discovery is to assert a title to individual superiority, which must be done with very great judiciousness indeed to avoid offending the vanity and self-love of, perhaps, many other talented men, who have been fruitlessly engaged in similar inquiries, when the clue they were in search of has been suddenly caught up by another. If the unsuccessful seekers be at all inclined to the task, it is generally easy for them, *after the discovery*, to cut down the inventor's merits to pretty nearly the ordinary standard, by shewing what hints he *might* have found in the writings of those who preceded him. The progress of discovery is, in fact, like that of a celestial satellite;—in reference to small divisions of time, and the state of knowledge at any given epoch, its course is always direct and advancing; but, viewed more comprehensively, it is seen to be frequently retrograde, traversing again and again tracts which had been gone through long before. It is for this reason that the very greatest and most useful additions to our actual knowledge consisted in very little more than a grouping together in conception of analogous phenomena, previously well known. The advances made in this way are, by the vulgar, ascribed to lucky accident, the merit of stumbling on truth being, by the mass of mankind, most absurdly exaggerated. A very ignorant man might discover a most valuable explosive mixture, but it required the mind of a philosopher to *prove* the circulation of the blood; and this was what was done by Harvey more completely than by any of his predecessors, for which he fully deserves all the honour which so long has enshrined his memory. Mankind, however, were not completely blind before Harvey's time. Hippocrates speaks of "the usual and constant motion of the blood"(*a*); "the veins and arteries, the fountains of human nature, the rivers that water the whole body and convey life, and which, if they be dried up, man dies"(*b*); and of these forming "an endless circle"—κυκλου γαρ γεγενημενου αρχη ουχ ευρεθη(*c*); receiving their blood from the heart(*d*). But to come to more recent times, we know that the unfortunate Spanish physician and theologian, Servetus, seventy-five years before Harvey's time, published in his *Christianismi Restitutio* a distinct account of the course of the blood from the right ventricle, through the pulmonary artery, to the lungs,

(*a*) *De Morbis*, lib. i. § 30.
(*b*) *De Corde*, § 5.
(*c*) *De Venis*, § 17.
(*d*) *De Structura Hominis.*

there to be purged by mingling with the air, and then returning through the pulmonary vein to the left auricle and ventricle, to circulate through the body; and this knowledge was neither lost nor altogether forgotten, but was constantly being added to, as the following quotation from a work published at Venice, seventy years before the announcement of Harvey's discovery, fully proves: "Idcirco quando dilatatur sanguinem à cavâ in dextrum ventriculum suscipit, nec non ab arteriâ venosâ sanguinem paratum ut diximus una cum aëre in sinistrum: propterea membranæ illæ demittuntur et ingressu cedunt: nam cum cor coarctatur, hæ clauduntur; ne quod susciperatur per eadem vias retrocedat; eodémque tempore membranæ tum magnæ arteriæ, tum venæ arteriosæ recluduntur, aditumque præbent spirituoso sanguini exeunti, qui per universum corpus funditur sanguinis se naturali ad pulmones dilato. Res itaque semper habet, cum dilatatur, quas prius memoravimus, recluduntur, clauduntur reliquæ, itaque comperies sanguinem qui in dextrum ventriculum ingressus est, non posse in cavam venam retrocedere."(*a*) No one, we imagine, who reads even the above short extract, can doubt that Colombus understood the circulation fully as well as Harvey himself; but Andreas Cæsalpinus, who published at Venice only twelve years later, not merely correctly describes the course of the blood and the action of the valves, but even uses for the first time the term circulation, adduces the swelling of the veins below a ligature in proof of the correctness of his views, and enters into various speculations as to the modes of inosculation of arteries with veins. Now all this is adduced merely to shew, not that Harvey was not practically the discoverer of the circulation, but what we believe we could make out in detail of all medical discoveries, namely, that in the medical sciences, and all sciences of observation, the increments of knowledge are so slow and detached, that he who groups and combines them into a consistent whole is deserving of far more praise than accrues to most real discoverers.

Let us now just glance at the history of our knowledge of the nervous system. This part of physiology is by no means of such recent date as some would lead us to imagine. True it is that Hippocrates confounded together nerves and tendons, but his not very distant successor, Galen, was really but little behind ourselves in information on this point a few years ago. Galen distinctly speaks of the brain as the seat of intellect and the centre of the nervous system, the brain proper presiding over sensation, and the cerebellum over mo-

(*a*) *Realdus Colombus (Cremonea), Anat.* lib. vii. p. 330; see also p. 325; and lib. xi. p. 411, Edit. Lut.

tion. The spinal marrow he regarded as a kind of separate brain, intended to direct the sensations and motions of the parts below the head. He likewise very clearly describes the anatomy of the nerves, their investments and varying consistence. Twenty centuries scarcely added a single idea to the knowledge derived from Galen, and the first real advance afterwards made was when Legallois proved experimentally the dependence of the function of respiration on the medulla oblongata. The next step was taken by Flourens, who, by a great variety of most barbarous, though most curious experiments on living animals, established that mechanical irritations of the medulla oblongata and tubercula quadrigemina excite muscular contractions, whilst similar irritations of the brain proper, cerebellum, corpora striata, and optic thalami, do not in the least affect the muscular tissues. Such was the state of our knowledge when Charles Bell, by bringing to bear on this subject the various information afforded by comparative anatomy, pathology, and experiment, with vast ingenuity, talent, and eloquence, bore down all opposition, and eventually compelled the world to acknowledge that there are in reality two totally distinct classes of nervous fibres, the one ministering to sensation and the other to motion, and deriving their origins respectively from the posterior and anterior columns of the spinal cord. Bell was less fortunate in procuring assent to his doctrine of respiratory tracts or lateral columns of the medulla oblongata, giving origin to nerves (the pneumogastric, facial, phrenic, &c.) neither voluntarily, motor, nor sensitive, but ministering to functions the true nature of which it was reserved for Marshall Hall to explain. To the author of the excito-motor theory we are indebted not merely for the explanation of the functions of the nerves above alluded to, but for the actual discovery and elucidation of *the peculiar functions of the spinal marrow itself.* That various motions may be produced in the limbs of decapitated and mutilated animals was undoubtedly known to many authors who have published years, perhaps centuries since; but the distinction of these motions from those dependent on sensation or peristaltic action and on muscular irritability; the reduction of them all to one general law or principle; the proof that the spine is the proper organ of this class of motions; and the application of the principles of reflex and excito-motor action to the explanation of various physiological and pathological phenomena;—these are additions to our knowledge, the importance of which it seems almost impossible to exaggerate or to deny; and although in Dublin the excito-motor theory has always been highly valued and is regularly taught in the Schools, and attributed exclusively to Dr. Hall as

its author, we have felt it due to the reputation of an ill-used (*vide* Prochaska Controversy) great man, even in speaking of one of the least-important of his works, thus to allude to the discoveries with which his name will be ever so honourably connected.

The volume, the title of which will be found in the heading of this article, is, like that which preceded it, a sort of common-place book, consisting of extracts from lectures, papers, and essays published by Dr. Hall at various times and in different ways, interspersed with some additional hints, observations, and suggestions which have since occurred to the author. These are thrown together like Sybilline leaves, with little or no attempt at method or arrangement, and are fully as various in their degrees of completeness or importance as in the subjects of which they treat; but the work throughout exhibits very many indications of the acuteness, originality, and true genius of its talented author. The volume is certainly above the common order of medical writing: it contains numerous good hints and useful practical observations, and will be perused with interest by most intelligent readers; but it has many things also that we dispute—some that we totally deny; and altogether we cannot help regarding it as one of the least valuable of Dr. Hall's numerous writings. The enthusiasm with which in the preface a profounder knowledge of physiology is proposed as a cure for all the ills of our profession, is to us an amusing illustration of the *idola specus*, when we reflect that Germany, the native country of physiologists, is also the fatherland of quacks; and knowing, as we do, from personal observation, that some of the physiologists of the day are either quacks themselves or patronisers of quackery. Indeed we most firmly believe that some of the very doctrines which Dr. Hall is always *incidentally* labouring to establish, viz., the necessity of being able to *explain* diseased action, and the attempt to *deduce* principles of treatment, whether from anatomy, pathology, physiology, chemistry, or mechanics, or from all combined, is a far more fruitful source of what is erroneous or absurd than even actual ignorance itself. A physician, undoubtedly, cannot know too much, but he must not attempt to reason *à priori* in a science of observation; and he must strive ever to bear in mind the golden maxim of the illustrious founder of another physiological school, the extravagance and exclusiveness of which have indeed already been forgotten, but which exerted an influence on the progress of scientific medicine by no means trifling or temporary. "*Il n'y a que l'observation qui fosse le vrai médecin. Le vrai medecin est celui qui guérit.*"(a)

(a) Broussais, *Examen des Doct. Med.* i. p. 36.

PART III.

REPORTS, RETROSPECTS, AND SCIENTIFIC INTELLIGENCE.

REPORT

ON THE PATHOLOGY, DIAGNOSIS, AND TREATMENT OF ABSCESSES OF THE ILIAC FOSSÆ.

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(Communicated to the Obstetrical Society).

Having lately had under my care a very interesting case (to be detailed hereafter) of abscess ofthe iliac fossa in an infant, I felt surprised, on searching for information on the subject, to find that it was one of which little or no notice had been taken by British writers, if we except the papers by Dr. O'Ferrall and Dr. Burne, and a short article in his Dictionary by Dr. Copland. I refer, of course, to the subject of iliac abscess in a general sense, because that branch of it occasionally observed as a consequence of inflammation of the uterine appendages, and connected mostly with the puerperal state, has recently been ably illustrated by Drs. Doherty(*a*), Churchill(*b*), Lever(*c*) and others.

Being, on the other hand, fully aware of the extent and great value of the researches of the French pathologists in this field, it occurred to me that to make a *résumé* of the facts which have been established, and of the opinions that are entertained concerning abscesses of the iliac fossæ, might not be altogether useless nor unacceptable; for, according even to Velpeau(*d*), it is a point in pathology but little understood, and one the history of which remains

(*a*) On Chronic Inflammation of the uterine Appendages.—*Dublin Medical Journal*, vol. xxii. p. 199. 1843.

(*b*) On Inflammation and Abscess of the uterine Appendages.—*Ibid.* vol. xxiv. p. 1. 1843.

(*c*) Pelvic Inflammation, with Abscess occurring after Delivery.—*Guy's Hospital Reports*, April, 1844.

(*d*) *Abcès de la Region iliaque.—Leçons Orales*, p. 218, 1841.

still to be written, notwithstanding all that has been done for it by Dupuytren, Dance, Menière, Grisolle, &c.

The object, then, of the following pages is to give, not a complete description of iliac abscess, but rather such a digest of its principal features, collected from various sources, as may lead to a more correct appreciation of the importance of a complaint, which, always dangerous, is too often fatal, and in practice is frequently not a little perplexing, on account of its liability to be mistaken for others bearing more or less resemblance to it.

"The causes," says Velpeau, "of abscess of the iliac regions are innumerable. Inflammation of the muscles, of the cellular tissue, of the peritoneum, or of the bones of this region, as well as of more distant parts, may give rise to iliac abscesses. In like manner, diseases of the kidneys(*a*), of the cæcum on the right side, and of the sigmoid flexure of the colon on the left, may produce suppuration of the iliac cavity. It may also be the consequence of perforation, scirrhus, and cancer of the intestines, of diseases of the testes and of the cord, of hernia, and especially of strangulated hernia; and it may succeed operations affecting the bladder, or its neck, the prostate, and the spongy or bulbous portion of the urethra. Diseases of the groin, and of the thigh, may likewise cause it; and inflammation of the synovial bursa of the psoas and iliac muscles, or of that of the hip-joint, are very common causes; the disease in the last-named case being transmitted through the cotyloid cavity, or the subpubic foramen, or by means of the synovial bursa of the psoas and iliac muscles. Diseases

(*a*) "It has been put forward," says Grisolle, "that inflammation of the kidneys may readily extend to the cellular tissue of the pelvis, but this is a supposition unsupported by a single fact. The fluctuation, indicating suppuration of the kidney, as Chomel remarks, may, by being discoverable at a distance, for the collection is sometimes very large, lead one to suppose there is a distinct abscess of the iliac fossæ, while this in reality is only secondary, and is caused by the pus of the renal abscess having emptied itself into the neighbouring cellular tissue." The only instance I have met of pelvic associated with renal abscess, confirms this view; it occurred in a man who was for several months a patient in Steevens' Hospital, during my residence there as clinical clerk. He had long been in the habit of passing pus with his urine; all his sufferings, which were intense, he referred to his bladder, and complained of little else. On dissection, the left kidney was found converted into an immense sac filled with pus, on the inside of which could be scraped off a thin lamina of the cortical substance of the kidney, and of this all that remained besides was a multilocular cyst in the interior of the sac: an abscess, containing fully a quart of pus, occupied the left iliac fossa, the muscles of which were denuded and infiltrated by the same. This abscess was clearly consecutive to that of the kidney, with which it communicated directly by one opening, and with the upper end of the ureter by two more. The pus from it had passed down under the peritoneum into the pelvis, and had accumulated between the bladder and rectum; the matter had also dissected the abdominal muscles from the peritonæum, and, finding its way between the bladder and pubis, it had been in part evacuated through the neck of the bladder. Some further particulars of this case may be found in the Reports of the Pathological Society, Dublin Medical Journal, vol. xv. p. 157.

of the genital organs of the female are very frequently the source of abscess of the iliac region."(*a*)

Velpeau divides abscesses of the iliac fossæ into three varieties; first, those that are "*intra-peritoneal*" or within the peritoneum; next the "*sub-peritoneal*," which are external to this membrane or in the cellular tissue of the pelvis; and thirdly, the "*sub-aponeurotic*" or those under the fascia iliaca. The first of these cannot, strictly speaking, be called abscesses, they are merely collections of pus, the result of circumscribed peritonitis; what follows will have reference principally to the second variety, as it is that of most frequent occurrence, and, being often associated with the third, from which there is often difficulty in distinguishing it, this last variety will be noticed incidentally.

As I shall freely borrow from the excellent memoir(*b*) of my friend, M. Grisolle, so I mean to follow his, Velpeau's, and Puchelt's(*c*) example in not drawing a distinction between abscesses succeeding child-birth and those unconnected with that state; for the same symptoms are common to both, the treatment is identical, and they are susceptible of the same termination; the only difference which occasionally distinguishes them being that, in some very rare cases of the former, the purulent collections appear to have their origin in the broad ligaments of the uterus, the cellular tissue of which is in reality but an offset from that which fills the iliac fossæ.

M. Marchal(*d*) has adduced abundant proofs of intrapelvic abscesses in connexion with parturition having been well known, if not to Hippocrates and Paulus Ægineta, at least to the French, for more than two centuries: Guillimeau, Mauriceau, and De la Motte described them under the name of "abscesses of the womb;" and from the time of Puzos to Petit they were considered as "depots of milk by metastasis." Under this head they were treated of by Doulcet, Van Swieten, Levret, Deleureye, Raulin, Delaroche, Doublet, and others; and the confidence with which Gastelier speaks of them, as such, is not a little amusing. He says: "Les metastases laiteuses sont incontestables; je les ai vues comme je vois le soleil nous eclairer, et je ne doute pas plus de leur existence que de la clarté du jour en plein midi."

The subperitoneal cellular tissue of the iliac fossæ, according to Marchal, appears to be much oftener the seat of puerperal abscesses than that of the broad ligaments. Thus, of twelve cases in which autopsies were made, five were examples of subperitoneal abscess,

(*a*) *Leçons Orales*, &c., p. 219.

(*b*) *Archives Générales de Médeciné*, 3e série, t. iv., 1833.—*Histoire des Tumeurs Phlegmoneuses des Fosses Iliaques.*

(*c*) On Perityphlitis, in J. Frank's *Praxeos Med. Univ. precept.* Part. 3æ vol. 2m. sect. primâ. p. 152. Leipsiæ, 1841.

(*d*) *Des Abcès Phlegmoneuses intra-pelviens*, 8vo. pp. 195. Paris, 1841. *Leçons Orales*, t. iii. p. 330.—*Des Abcès de la Fosse iliaque droite.*

three of subaponeurotic, one of multiple intraperitoneal, two of simple ditto, two of ovarian, and three of mixed abscess. Of these abscesses he makes two classes, the first comprising abscess of the subperitoneal cellular tissue, and of the ovaries, and intraperitoneal abscesses; the second class being the subaponeurotic.

Puerperal abscesses, Grisolle states, appeared in eleven out of fourteen cases, from the third to the tenth day; and during eight years' residence in the hospitals of Paris he never saw anything to prove they were caused by transmission of inflammatory action from the uterus. They are found more frequently on the left than the right side; for of seventeen such cases, the right, he found, was affected in six, the left side in eleven; and of the nine cases recorded by Dr. Lever, in two only was the right side of the pelvis affected, in five the left: and in two the matter was evacuated from both sides. This difference, which some have endeavoured to explain by attributing it to a drag on the left uterine ligament, caused by the inclination of the uterus to the right side during utero-gestation, is not admitted by Marchal, who says puerperal women are most liable to abscess after a first pregnancy, if they do not nurse(*a*), and if they be aged between fifteen and twenty-five years.

Iliac abscesses not connected with the puerperal State. Abscess of the iliac fossæ, independent of the puerperal state, is in like manner not equally common at all ages. Persons aged between twenty and thirty years are most liable to it: of fifty-one cases, Grisolle found the proportion as follows:—between eleven and twenty years there were seven cases; between twenty and thirty, twenty-seven; between thirty, and forty twelve; and between forty

(*a*) Grisolle also admits this as one of the predisposing causes of iliac abscess. He never, in fact, observed this in a female giving suck; and its influence is thus explained by Marchal: "The puerperal state is in a great measure explained by the condition of the blood in the parturient woman. The process of pregnancy has induced a fibrinous, so to speak, diathesis. The fœtus requires a constant supply of fibrine; and the female system, in consequence of this demand, acquires a singular tendency to the secretion of this formative element; but unfortunately it is, at the same time, the essential *materiel* of inflammatory action, and thus it is that the very condition that gives the maternal system the power of supporting the life of the young being is the prolific source of various ills and sufferings. Thus, although pus, *en nature*, is never existent in the blood, and therefore can never be transported, or conveyed by metastasis, to any local seat of inflammatory action. the elements of this secretion may be present in it at any time, just as the elements of the fœtus are present in it during the process of fœtal development. Keeping this idea in view, we may be inclined to regard, with more favour than pathological writers of the present day are wont to do, the old theories about "*milky deposits*," "*metastatic collections*," &c. Petit has very happily remarked (*Dict. des Sci. Med.*) that a woman while suckling has changed her very mode of existence; and we need scarcely say, that the recent beautiful researches of MM. Andral and Piorry have contributed not a little to bring back the attention of pathologists to a consideration of the fluids, as well as the solids, of the living body.—l. c. 119, and *Med. Chir. Rev.* No i. new series, 1845, p. 142.

and sixty, five cases. It is found oftener on the right than the left side, and so great is the difference, that, taking all cases published, the right was engaged in fifty-three, the left side in twenty only.

Dupuytren(*a*), who was the first distinctly to examine the history of abscess of the right iliac fossa, seeing that abscesses were much more frequent on the right side than the left, endeavoured to account for this discrepancy by referring it to the structure of the cæcum, in which the accumulation of hardened fæces, and foreign bodies detained by the contracted iliocæcal valve, are very capable of causing an irritation that may, he supposed, be readily transmitted to the loose cellular substance in which that portion of the intestine (unlike the sigmoid flexure on the left side, which has a distinct mesentery) lies imbedded. Menière(*b*) Husson, and Dance(*c*) partake of the same opinion. The former says: "Assuredly it is not necessary that an inflammation be of great severity in order to produce the same disease in contiguous organs. Inflammation of the mucous membrane lining an excretory canal is readily transmitted to the enveloping cellular tissue. Pathology has proved this for the lachrymal sac and nasal canal, the pharynx and œsophagus, both orifices of the stomach, the rectum, the neck of the bladder, and the canal of the urethra." O'Ferrall(*d*) and Copland(*e*) admit such transmission of inflammation to be one of the causes of the iliac abscess. Grisolle does not absolutely deny its possibility, but this transmission appears to him to be excessively rare; and it has not yet been proved, he says, that iliac abscess has ever been the conse-

(*a*) It can hardly be said to detract from Dupuytren's merit of originality, that Peter Frank had already given an obscure description of this complaint under the name of "Peritonitis Muscularis" and "Psoitis,"* and that even Aretæus was acquainted with abscesses seated near the colon and kidney, and of their opening commonly into the bladder or uterus; one of these, on the right side, he says, he cut into, and thus gave exit to much pus, which also flowed away during many days through the kidneys and bladder, and the man recovered. After describing the routes by which collections of pus escape from the chest, he says: "Ὑπο δὲ τὸ διάφραγμα ἐν τοῖσι σπλάγνοισι, ἦπατι, σπληνὶ, νέφροῖσι, κύστις. (ἐς αναγωγην ὁδος τω πυω εστι) ἐπὶ γυναικῶν δὲ καὶ ὑστέρη· ἔταμον δὲ καὶ ἐγῶ εν κώλω τινὶ ποτὲ ἀπόστασιν τὰ ἐπὶ δεξιὰ πρός ἦπατι· καὶ πολλόν τι ἐσσύθη πῦον· πολλὸν δὲ καὶ διὰ νεφρῶν καὶ κύστιος ἐς ἡμέρας πλέυνας ἐῤῥυη καὶ περιεγένετο ὥνθρωπος."†

(*b*) Des Tumeurs phlegmoneuses occupant la Fosse iliaque droite.—*Archives Générales*, t. xvii. p. 188, 1828.

(*c*) Sur quelques Engorgemens inflammatoires qui se devellopent dans la Fosse iliaque droite.—*Réperto.re d'Anatomie et de Physiologie*, t. iv. p. 135, 1827.

(*d*) On phlegmonous Tumours in the right iliac Region.—*Edinburgh Medical and Surgical Journal*, vol. xxxvi. p. 1831.

(*e*) On Inflammation of the pericæcal Tissue.—*Dict. of Pract. Med.* 1832, art. "Cæcum."

* *De Curand. Hom. Morb. Epitome*, t. ii. pp. 183, 186. Mediolani, 1813.

† *De Caus. et Sign. Morb.* lib. i. cap. ix. p. 96. Ed. Boerhaave.

quence of acute or chronic enteritis. The science possesses, he believes, very few examples in which inflammation of the conjunctival, Schneiderian, or buccal mucous membrane has been observed transmitted to the subjacent cellular tissue, and has there produced abscess. But, to go no further than the mucous membrane of the digestive tube, it will be found, on consulting the researches on typhus and phthisis, of the laborious and accurate Louis, that the inflammation, often followed by extensive ulceration, so common to the ileo-cæcal portion of the intestine, was not in one case transmitted to the cellular tissue of the iliac fossæ. This, he observes, in opposition to the general rule laid down by Menière, is nothing extraordinary, "et il faut le considérer comme étant une application de cette idée génerale develloppée par Bordeu et Bichat et qui consiste a regarder le tissu cellulaire periphérique des organes comme formant à ceuxci *une atmosphere* qui isole leurs actions morbides." Grisolle, therefore, considers the intestinal derangements, such as constipation, or diarrhœa and colic, attendant upon iliac abscess, to be not the cause but the effect of the abscess, which, being often slow in its progress, is not observed until the former attract notice to it.

That constipation cannot constitute of itself an efficient cause, seems most probable, from the admitted fact that fæcal accumulations in the cæcum are by far more frequent in females than in males. Yet it appears that the sex of the latter peculiarly disposes them to iliac abscess, a point on which Dupuytren, Dance, Menière, and Grisolle, are all agreed. Dupuytren calculated the proportion of males to females so affected as fifteen to one; and, according to Grisolle, of fifty-six cases unconnected with the puerperal state, forty-six were in the male, ten only in the female sex.

Dr. Burne(*a*), with Grisolle, finds it difficult to understand how inflammation, alone, of the cæcum can produce phlegmonous tumour and abscess in the right iliac fossa. He admits that typhloenteritis may arise from the irritation produced by hardened fæces and foreign bodies in the cæcum; but maintains, that "the abscess itself is secondary, is only a stage or symptom, and results from the perforative ulceration of either the cæcum or the appendix." "Ulceration," he says, "of the mucous membrane, as indicated by the bowel complaint, is a pre-existing condition of the cæcum, and, invading eventually the other tunics, perforates the cæcum at its posterior part, where it is devoid of a peritoneal tunic; hence the inflammation and abscess of the subcæcal tissue which give rise to all the phenomena of phlegmonous tumours or abscesses in the right iliac fossa."—p. 66. This statement, however, is not reconcilable with what we find in a previous paragraph, where he says that, "no instance has come within my observation in which,

(*a*) On Typhloenteritis, or Inflammation and perforative Ulceration of the Cæcum and of the Appendix Vermiformis Cæci.—*Medico-Chirurgical Transactions*, vol. xx. p. 200, 1837, and vol. xxii. p. 33, 1839.

upon dissection, perforative ulceration of the cæcum has been found, all the cases of supposed perforation having recovered."—p. 35. We are forced, therefore, to conclude, that abscess from perforative ulceration of the cæcum must be of rare occurrence. Dr. Burne refers to Dr. O'Ferrall's case alone, and could not produce more than a solitary one of his own (case No. v.) of what he considered to be such, although that it was so may be fairly questioned.

A girl received a kick in the right groin. Five months afterwards symptoms appeared of abscess in the part, and these continued for the space of six months, when the swelling, which had assumed the characters of a deep-seated abscess, was punctured, midway between the pubis and anterior superior spine of the ilium, and there came away a few ounces of dark, thick, bloody matter, with fetid gas. The right iliac and inguinal regions were full and hard in the course of the spine of the ilium, as was also the lumbar region, where the skin was red, as if the abscess were pointing in that direction also. Two other openings were made higher up, and more posteriorly, through which the sloughing muscle and tendon came away. The patient was perfectly well in three weeks time from the first opening. The case is headed, "*Fæcal Abscess in the right iliac and inguinal Regions, from ulcerative Perforation of the Cæcum;*" yet it affords no positive evidence of there having been either perforation of the gut or fæcal abscess.

Perforative ulceration leads inevitably to artificial anus. This girl recovered rapidly and perfectly; there was no discharge of pus by stool, or of either pus or fæcal matter(*a*) from the openings externally: and as for the proofs of the perforation supposed to be furnished by the fæcal odour and gaseous contents, (which here resulted from the gangrenous action), it is well known that such are common features of purulent collections in the vicinity of an intestine. Thus, Grisolle states that, although the pus of iliac abscesses is generally inodorous, in two cases this fluid had a fetid, stercoral odour, without there being any reason to believe in a communication existing between the abscess and the intestine; and Dr. Law(*b*) has given the particulars of a case of abscess of the left iliac fossa, which, having burst, discharged a quantity of greenish, purulent matter, of a decidedly feculent

(*a*) In abscess from perforative ulceration of the intestine from within outwards, the passage of the contents of the latter into the former seems almost inevitable. When the opening occurs, on the other hand, from the abscess into the intestine, such extravasation of the fæcal matters is very rare; and for this Dupuytren gives the following three reasons, which are quite inapplicable to the former case. 1st. The gradual emptying of the abscess, combined with the constant abdominal pressure. 2nd. The obliquity of the opening, which resembles that of the ureter into the bladder. 3rd. The intestine, loosened from its attachment (*decollé*), acting like a valve: and to these Menière adds another reason, namely the mucous membrane being forced inwards in the form of a papilla, resembling that of the biliary duct.

(*b*) Dublin Medical Journal, vol. xviii. p. 335.

smell, yet the colon, on dissection, was found to be only superficially ulcerated. The same may be said of abscess of the broad ligaments succeeding child-birth, the pus in such "having frequently the odour of that found in the neighbourhood of the rectum(*a*)." King, Martin, and Dupuytren, have each given cases of a similar kind in which gas in great quantity was mixed with the pus.

Dr. Burne has succeeded better in proving that perforative ulceration of the appendix,—where that does not rapidly produce, as it is very likely to do, universal peritonitis,—is sometimes followed by circumscribed abscess within the peritoneum. Still, like most of those who advance what they consider new views, all the cases he adduces to illustrate this occurrence do not seem to warrant the conclusion he draws from them. This remark is applicable to Case XIII., headed "*Perforative Ulceration of the Appendix Vermiformis Cæci.*" Sir John M. was seen by Dr. Burne on the third day after his having been suddenly taken ill with pain and fulness of the abdomen, constipation, and sickness. Sir John was then sick, and at times vomiting. He had flatulent fulness of the belly, and pain referred to the right ilio-inguinal region, where was great tenderness and deep-seated hardness. The bowels had acted slightly. He remained in a precarious state for many days, vomiting matter like coffee grounds. The local affection assumed the character of a distinct tumour, the size of a small orange, accompanied with great tenderness on pressure, and it resisted all means employed for its resolution, when, at the end of six weeks, Sir John was seized with a diarrhœa, by which pus in a considerable quantity was evacuated, and he soon recovered perfectly. The advocates for a primary inflammation of the pericæcal tissue being

(*a*) "Fetid purulent depots," says Velpeau, "are generally developed, or at least have their *point de depart* in the fascia propria; that is to say, in the cellular layer uniting the peritoneum to the walls of the abdomen. They may be also met with between the deep layer of the aponeuroses and muscles, as well as beneath the skin, when the tissues underneath are very porous, or when they have a very slight degree of thickness. As to the mode whereby the fetid odour is developed, this is explained by imbibition; these abscesses being, by their deep-seated parts, in contact with the digestive canal, receive, by transudation, a certain portion, whether of the liquids, gases, or of the odour which is constantly present. Supposing that these matters do not enter, in point of fact (*n'entrassent point en nature*), it appears probable, at least, that their continual movement, their variations of temperature, and the molecular and chemical action they exert on each other must react on the abscess in the vicinity, and determine some particular operation giving rise to the bad smell. What makes me think that the intestinal substances, or, at least, some of their elements, pass in part into the purulent depots, is, that the odour is not the same in all the regions where these abscesses are developed. The odour is perfectly different in abscess of the mouth, neck, and chest; each has one special to it, and the colour also of the fluid in the abscess is almost constantly modified by, and is generally more or less *en rapport* with the contents of the neighbouring canals. — *Leçons, Orales, Abcès fétides*, p. 378.

the cause of abscess, might, with at least equal confidence, lay claim to this case as supporting their theory, and with still greater reason to Case XII., one of "*pelvic abscess and peritonitis with concretions in the vermiform appendix*," *without* perforation. An abscess was here found in the anterior part of the pelvis, between the peritoneum, bladder, and os pubis, with inflammation of the corresponding peritoneum, to which was agglutinated the extremity of the appendix, which was found hanging in the pelvis. In the canal of the appendix were two or three dark concretions, the size of raisin stones; but the mucous and serous tunics, as also the general organization of the appendix, were reported to be sound.

The foreign body, we conceive, must be supposed to have been as much the cause of the abscess in this case, as in a very remarkable one noticed(*a*) by Sir H. Marsh, where it was undoubtedly the cause of extensive and fatal peritonitis; there was no lesion of the intestine except inflammation of the vermiform appendix, which was thick, and of a deep chocolate colour; and its whole internal surface was covered by a dense layer of coagulated lymph.

Dr. Burne has not given a single case which proves that "inflammation or ulceration of the appendix, ending in circumscribed peritonitis and abscess within the peritoneum, has ever ended in the bursting of the abscess eventually into the cæcum, thus discharging itself by the rectum; or that it directs its course to the surface of the body and points in the right lumbar or inguinal region," except in the form of a fæcal or gangrenous abscess, like (Case No. VIII.), but this, being almost necessarily fatal, or at least ending in artificial anus, can have no analogy with what by others is considered true phlegmon of the iliac fossæ, from which recovery is the rule and not the exception. The more ordinary termination, on the other hand, of intra-peritoneal abscess arising from perforative ulceration, or partial sloughing of the appendix (which are the consequences, in general, of the impaction of foreign bodies, or fæces, in the latter), is its becoming diffused in the peritoneal cavity,—an occurrence that proves rapidly fatal, and that is illustrated in Dr. Burne's cases, Nos. VII. and XIV., and those related by Drs. Law(*b*), Patterson(*c*), Bury(*d*), M. Grisolle(*e*), and many others.

However this be, Dr. Burne is scarcely justified in the very general application of his mode of explaining the origin of phlegmonous tumours and abscesses of the right iliac fossa, when he says that "the greater number of those cases detailed by Dupuytren and others appear to have been cases of perforative ulceration of the appendix, the tumours and abscesses being consequent on this perforation, and not original(*f*)."

(*a*) Dublin Med. Journal, vol. xviii. p. 336.
(*b*) Dublin Med. Journal, vol. xviii. p. 335.
(*c*) Ibid. vol. xxvi. p. 412.
(*d*) Provincial Medical and Surgical Journal, October 1st, 1845.
(*e*) Loc. cit. p. 45.
(*f*) It would appear from his paper that Dr. Burne was not aware of

Such a mode of explanation, moreover, will not serve for cases like that noticed by Dr. O'Ferrall(*a*), in which the appendix is free from disease; nor such as Dr. Law's, above noticed, where the abscess is on the left side.

The conclusion, therefore, seems unavoidable, that Dr. Burne has not succeeded in shewing that *true* phlegmon of the iliac fossa ever arises from perforative ulceration of the cæcum, or of the appendix vermiformis; consequently we must be inclined to favour rather the views of Dupuytren, Husson, Dance, Ménière, Grisolle, Velpeau, Puchelt, &c. as to its seat and origin. Their opinions are corroborated by many facts, but perhaps by none better than the very valuable dissection of a case related by Dr. Williams(*b*), in which the abscess was found "deep in the iliac fossa, completely behind the cæcum, and between that intestine and the iliac fascia. It was in progress of making its way into the cæcum, which was at one point, corresponding to the abscess, almost perforated to the extent of a sixpence; nothing, indeed, intervened between the cyst of the abscess, which was about the size of a walnut, and the cavity of the intestine, but a thin film, little more than the epithelium of its mucous coat." Death ensued from the abscess having burst into the peritoneum before the perforation of the gut was completed. The intestine was healthy-looking and contained a very small quantity of fæces.

Dupuytren thought that house-painters, copper turners, and colour grinders, were more liable than other persons to abscess of the right iliac fossa: observation has not proved this. Neither does it seem correct to attribute the abscess to the presence of intestinal worms(*c*); their having been found in some cases amongst its contents may have been merely an accidental occurrence, and by no means proves that they caused the perforation of the gut through which they passed. Mr. Copeland(*d*) has given a case in

others (Menière, Berard, and Hawkins), as well as Dr. O'Ferrall, having already recognised perforative ulceration of the cæcum or colon to be one of the causes of iliac abscess. Neither is he original in attributing this to an affection of the vermiform appendix, for Mêlier had long before explained a case in this way.—Vid. *Jour. Générale de Méd.*, 1827, and Menière, l. c. p. 522.

(*a*) Dublin Med. Journal, vol. xv. p. 288.

(*b*) Dublin Med. Press, February 19th, 1845.

(*c*) Pézerat (*Jour. Complém. des Sci. Méd.*, t. xxxiii. p. 268), gives a case of a phlegmonous abscess of the right iliac fossa, which opened spontaneously, and discharged a very large, dead, ascaris lumbricoides. The subject of it was a female, aged fifty years. There was no discharge of fæcal matter, and she recovered in about a fortnight. Mr. Howell (Medical Gazette, Sept. 12, 1845, p. 854) has given the case of a man, aged 70, with abscess in the right groin, attended with symptoms of strangulated hernia, from which two lumbrici teretes, and afterwards fæcal matter, were discharged, and the patient recovered in three weeks. In this case, when the abscess was opened, about four ounces of pus, and pus only, escaped from the wound; the worms were found on the poultice next day. In Pézerat's case about a livre and a half of excessively fetid pus came away at once, and the worm did not make its appearance until the third day.

(*d*) Med. Chir. Trans. vol. iii. p. 190.

which a large oval calculus (fusible) was discharged from an abscess in the right groin. The female recovered.

For our part, we think, with Grisolle, that, in many cases of iliac abscess, the cause cannot be discovered.

The following case, alluded to at the commencement of this Report, we do not attribute to any of the causes already noticed. The functions of the bowels were quite natural until the abscess was formed; nor could there well have been a fæcal accumulation in the cæcum of an infant, only six months of age, who had never had any other food than its mother's milk.

Abscess of the right iliac Fossa, opening into the Bladder, and subsequently pointing in the Back.—Nicholas Smith, aged six months, was admitted to the Institution for Diseases of Children, November 22nd, 1844, under the care of my friend and colleague, Dr. Dwyer. For three weeks subsequently the exact nature of his complaint remained very obscure, the only remarkable symptoms exhibited being an extreme degree of restlessness with fever. His nights were passed in crying and tossing about in bed, and he could not be induced to place his legs under him as before. At the end of that time, Dr. Dwyer, having observed a soft, elastic tumefaction of the integuments at the right side of the hypogastric region, and principally in the situation of the inguinal canal, was kind enough to draw my attention to the case. There was then fulness of the abdomen, over the right side of which large blue veins were very apparent, and, in addition to the puffiness of the integuments already mentioned, we could readily feel, by making pressure with the extremity of the hand, a very hard, fixed, elongated, and painful tumour, deeply seated behind Poupart's ligament, with which it lay nearly parallel. The entire of the right lower extremity was swollen and hard, but not œdematous. The thigh was immoveably semiflexed upon the pelvis, and the slightest attempt on our part to move it produced great pain, as he then instantly began to cry.

His mother could assign no other cause for his illness than his having been hurt, she supposed, by the upsetting of his cradle the week before he was first brought to the Institution. His bowels, which, she stated, had been previously perfectly natural, were now rather too free; but this may have been the consequence of the medicines he had been using. His illness commenced with vomiting, and he still frequently rejected the suck, and was very feverish and restless.

He remained much in the same state, the tumour in the pelvis still continuing to enlarge, until December 26th, when there was discharged about a cupful of pus along with the urine, and this purulent evacuation, which was followed by great relief, continued during twelve days, at the end of which time the tumour had diminished much in size.

January 26, 1845. With the exception of a small quantity this day, there had been no discharge of pus for the last four days, and the pelvic tumour was begining again to enlarge. There was now

also a considerable tumefaction of the right buttock, between the margin of the ilium and the spine of the sacrum, having a very indistinct sense of fluctuation; the skin was not discoloured, except by blue veins, which were very numerous over the lumbar region and the side of the abdomen also. The thigh was rigid, swollen, and semiflexed as before.

23rd. There had been no discharge of pus from the bladder since last report. The tumour had enlarged very much posteriorly, and had a boggy feel; handling it caused him much uneasiness, from which he was otherwise now tolerably free. I made an opening into the most prominent part of this abscess, and gave exit to much thick pus, the flow of which seemed to be increased by his crying. The cavity of the abscess was large, and I could readily pass a probe upwards to the extent of three or four inches, so as to touch the margin of the ilium at its junction with the sacrum. The tumour in the iliac fossa is still perceptible to the touch.

Feb. 26. The abscess of the glutæal region has disappeared; there remains only a general fulness of the buttock. The opening, which discharges a watery, and sometimes bloody pus, is marked by a red papilla; it occasionally closes for a couple of days, and the pelvic tumour then enlarges, and pus is observed in the urine, although not in such quantity as at first, yet there is sufficient to stiffen the linen. The varicose condition of the cutaneous veins is less. The limb still remains swelled and rigid. Bowels natural; emaciation; complexion waxy; nothing abnormal about the spine or hip-joint.

No pus was ever remarked in the stools, nor was there any irritability of the bladder.

I lost sight of this child until the month of September following, when he was brought to me labouring under a slight attack of diarrhœa, the consequence of dentition. He had completely recovered the effects of his former complaint; he was plump, and looked healthy. The rigidity and tumefaction of the leg had entirely disappeared, and he could use his limbs as well as other children of his age.

In this case, which, in some respects, is very remarkable, and perhaps unprecedented(*a*), so far as the tender age of the little patient is concerned, we are inclined to think that the abscess was the consequence of some injury received when the cradle was upset, for contusions or strong pressure on the iliac region have given origin to phlegmon of this part. Bourrienne(*b*), so long ago as the year 1775, gave two instances of this occurrence. In one of these the injury was received by a cask which, while a man was in the act of raising to his shoulder, slipped to his belly ; the other was caused by a person hurting himself, while road-making, with the handle of

(*a*) Dr. Beatty mentions his having observed iliac abscess in a boy aged five years.—*Med Press*, December 11th, 1844. I have not met with any recorded case occurring under that age.

(*b*) *Journal Général de Méd.*, t. xliii. p. 172.

his spade. Cæsar Hawkins(*a*) gives another case, which occurred in a little sweep by his falling over a donkey he was endeavouring to mount.

Whether Dr. Kyll(*b*) be correct or not in attributing many of the abscesses following parturition to the partial rupture of, or some injury inflicted on, the psoas by a too great separation of the thighs in delivery, a case noticed by Grisolle(*c*) renders it probable that a violent effort for maintaining the trunk in the erect posture may be the cause of iliac abscess(*d*), in consequence, he supposes, of the rupture and inflammation of the cellular tissue. The same sort of effort will cause a tumour hitherto indolent to inflame, such as the case observed by Boyer, of a man who, on endeavouring to drag a cart, experienced great pain in a tumour he had remarked for some days previously in the right iliac fossa. He fell down, and was seized shortly after with a rigor, fever, and numbness of the right leg. The tumour softened, and on the nineteenth day an incision was made into it, and gave exit to a great quantity of pus.

Wilhelmi(*e*), in his dissertation on perityphitis (which he classes with the neurophlogoses of Autenrieth), thinks Menière's division of iliac abscesses into the chronic and acute (the variety depending on whether the inflammation passes the fascia iliaca or not), as too arbitrary; for the fascia varies much in development in different subjects, and it may be quite destroyed, and still the case be nevertheless acute. Wilhelmi, therefore, proposes dividing them into the rheumatic and scrofulous, supposing the former to originate externally and to pass inwards, the scrofulous taking a contrary course(*f*). Such a distinction seems visionary, and would be as difficult to recognise during life as, if recognised, it would be devoid of practical utility. According to Grisolle it is almost impossible to determine, even by *post mortem* examination, whether the subperitoneal or subaponeurotic tissue was the first affected. If the suppuration have continued long, the psoas, iliac, and quadratus lumborum muscles are ordinarily more or less altered, their fibres are blackened, softened, and in part destroyed, and they are dissected by, and infiltrated with pus. Of twelve cases in which autopsies

(*a*) London Medical Gazette, vol. x. p. 821.

(*b*) *Rust's Magazin*, t. xli, and *Archives Gén.*, second series, t. vi. p. 98.

(*c*) L. c. p. 52; see also case in Med. Chir. Rev. vol. xxvii. p. 137.

(*d*) In Medico-Chir. Rev. vol. xxxvii. p. 178, another case is quoted, of an abscess which seemed to have been caused by a man suddenly stooping down to lift up a burden. He felt a sudden pain in the right groin, which did not last above a minute, but was followed by a dull, deep-seated uneasiness, and ultimately ended in abscess.

(*e*) *Dissert. Inaug. de Perityphlitide.* Heidelbergæ, 1837.

(*f*) "Si enim causa morbi non in hominis natura sita est, si. e. g. homo perfrixit, morbus extrinsecus oritur, sin dyscrasia quædam, scrophulosis, tuberculosis, tum morbus ex interno originem ducit; jam quum illius rheumatismus, hujus scrofulosis causa frequentissima sit, nomen quoque de iis sumpsi. Rheumatica perityphitis abscessu plerumque interne, scrophulosa externe aperto finitur."—p. 45.

were made, in ten there was found alteration of the muscles. The propagation of the inflammation to the deep-seated parts, Menière thinks, is announced by the movements of the thigh becoming painful; and that this indicates the probability of the abscess being slow in its progress, and of its bursting in the loins, at least at a distance, and not into the cæcum or neighbouring canals.

Although the pus of iliac abscesses sometimes spreads to a great distance up to the liver or kidneys, or even to the opposite side, and may point so high up as to be on a line with the umbilicus,—as in the cases recorded by Berard(*a*), Chomel, Benevoli, Melleret, and Paroisse,—in two-thirds of the cases it tends to escape in the neighbourhood of Poupart's ligament, or near the anterior superior spine of the ilium(*b*). So great a tendency has it to escape in more than one direction, that in fourteen cases Grisolle found it made its way out to the surface of the body of itself, or assisted by art; while in fourteen others, it appeared externally at the same time or shortly after it had passed through the large intestine, vagina, or bladder. It frequently passes into some part of the large intestine solely, the rectum, colon, or cæcum, and into the last named part oftener than the others, a route which was considered by Dupuytren the most favourable of all, in consequence of the depending position of the opening always allowing a free exit to the pus.

In the female, iliac abscesses open sometimes into the uterus(*c*), more frequently into the vagina; the former are generally fatal. The latter, Grisolle considers their most favourable outlet, and it occurs in general in abscess of the left side; the pus here making its way into the pelvis along the rectum more easily than when the abscess is on the right side, and in the neighbourhood of the cæcum. It then gives rise to the appearance of leucorrhœa, and the difference is not easily detected, the opening being concealed by the folds of the vagina.

Evacuation of the abscess through the bladder very rarely occurs. Of eight(*d*) cases I find recorded of iliac abscess opening into the bladder, which, with Smith's, make altogether nine cases, six were in females (of which five were puerperals) and three in males. In eight the abscess opened elsewhere in one or more directions, either in the groin, 4; rectum, cæcum, or colon, 4; vagina, 2; uterus, 1; or loins, 1. One case alone ended fatally, a result attributed to the irritability of the bladder produced by the contact of the pus, but erroneously so, it would appear, as in the remaining seven cases there was nothing of the kind observed. In six of these cases the abscess was on the right, in three on the left side. The several above-mentioned routes by which the pus

(*a*) *Bullet de la Soc. Anat.*, Marchal, l. c. p. 51.
(*b*) Husson and Dance, Menière, Gendrin, Robert, Boivin.
(*c*) Med. Chir. Rev. vol. xxvii.
(*d*) Viz., one each by Menière, Dance, H. J. Johnson, Martin, Hawkins, and Boivin, and two by Marchal.

of iliac abscesses finds exit, were, it is worthy of note, thus described by Jean Liébaut, in the year 1582.

"La bouë contenue en l'abcez ainsi que le mouvement de nature se tourne plustost vers une part que vers l'autre, sort quelques fois par le fondement avec les egestions; quelques fois en pissant avec l'urine, aucune fois par le conduit de la nature, et quelques fois se jette entre le peritoine et les boyaux, tendant extérieurement vers la peau du ventre, quelques fois par la hanche ainsi que j'ay observé sera facile cognoistre le lieu par lequel la bouë sortira."(*a*)

The formation of pus in phlegmon of the iliac fossæ is slower than in other parts of the body, which Grisolle attributes to the cellular tissue of this part containing very few (*infiniment peu*) fatty vesicles. The period, of course, varies in different individuals, but the average time at which it is first formed he calculates to be the twentieth or thirtieth day; it has, however, been observed at variable periods from the tenth day to the third month from the commencement of the symptoms. Its evacuation, whether on the surface of the body, by the bladder, vagina, or intestine, is always, even in hopeless cases, followed by a great and general relief; and, whether it drain off slowly or flow away rapidly, it is observed that the symptoms due to compression by the tumour of the neighbouring parts, especially the cæcum, muscles, and vessels, cease rapidly; the constipation and meteorism vanish; the movements of the thigh are made freely, and are no longer painful; and the swelling of the leg disappears. In whatever way the matter gets exit, if it continue to flow beyond a certain time the patient is soon exhausted by hectic or consumption; and a case observed by Blandin in which the opening was (what is generally considered, since Baglivi's(*b*) time) the most favourable, namely, into the cæcum, terminated fatally, in consequence of the abundance of the suppuration. The coincidence of phthisis with large abscesses of the iliac fossæ is very frequent(*c*). Of the deaths produced by iliac abscess, a sixth are caused by peritonitis, and this may ensue at a very early period by extension of the inflammation(*d*), or at a late one by rupture of the abscess and effusion of its contents into the peritoneal sac. In fine, death may ensue from the mere exhaustion of an extensive suppuration, or the prostration attending a gangrenous abscess, even though this have not opened externally, and there may not have been peritonitis.

Diagnosis.—The diagnosis of phlegmonous tumours of the iliac

(*a*) *Trois Livres appartenant aux Infirmitez et Maladies des Femmes.*

(*b*) Opera Omnia Med. Pract. Lugduni, 1714, p. 64.

(*c*) C. Hawkins, Lond. Med. Gaz., vol. x. p. 820, "On Abscess in the Pelvis;" and ibid. vol. xxxviii. pp. 507, 822.

(*d*) Husson and Dance, obs. iv., and Hawkins, who remarks that it is then of a low description, and attended with so great apparent debility, that on one occasion wine was instantly ordered, the peritonitis being entirely overlooked, and not discovered till after death, which occurred in forty-eight hours.

fossa is often difficult, this region being occasionally the seat of different affections, the symptoms of which bear a greater or less degree of analogy to those of the former. In the early stage of iliac abscess the skin, as well as the muscular parietes, may be readily moved over the tumour, while, if the *abscess* were seated *in the abdominal walls*, by moving the one we move the other. This method of diagnosis is most satisfactorily applied when the patient is placed in the prone position, on hands and knees. Aneurism, hernia, encephaloid, and osteosarcomatous tumours, diseased liver and kidneys, have been mistaken for iliac abscess, perhaps from want of tact or information, or from a neglect of what is in every instance indispensable, a careful observation of the symptoms and examination of the parts. A tumour formed by a *diseased ovary* may be recognised by its being generally of a globular form, occasionally lobulated, and very often so moveable as to escape from the touch altogether, and motion can be communicated to it by acting on the uterus. *Circumscribed acute*, or *chronic peritonitis*, producing tumours perceptible both by sight and the touch(*a*), may also simulate iliac abscess. Here, by attention to the symptoms and the order of their succession, the nature of the affection may be easily recognised. Thus peritonitis is ushered in by a rigor more or less marked ; this, on the contrary, is rare in abscess(*b*) until the pus comes to be formed. The pain of the former is sharp, lancinating, and differs much, both in its intensity and nature, from that of the latter, in which, however, it is generally the first symptom, and occurred in forty-nine out of fifty-seven cases. The former, moreover, is accompanied in general by vomiting, at least by nausea, hiccough, and intense fever ; and, finally, when the tumour becomes evident,

(*a*) Of fifty-six cases there were but five in which rigors were observed at the outset, and three of these were puerperals.—*Grisolle*, l. c. p. 55.

(*b*) Such effusions are always of very grave import, yet they may be of great size, and still terminate favourably. A case is given in the *Journal de Médécine* for 1789, of a lady, who, on the second day after a tedious and difficult labour, became feverish, and the hypogastrium was swollen and painful. The fever subsided, but the swelling increased, so that on the third week there was distinct fluctuation perceptible within the abdomen. Paracentesis was performed, and nearly six *livres* of a viscid, fetid fluid, containing gas and numerous flocculi, were discharged. The opening having closed, after some days it opened again, and the matter flowed off in a stream for a quarter of an hour ; next day several pounds of an offensive fluid came away, and thus by partial evacuations this enormous deposit emptied itself in the course of five or six days: in six months the opening finally closed. Dubois met with a similar case, in which, after symptoms of metroperitonitis, there occurred an extreme tension of the abdomen, and also a small fluctuating tumour in the groin. This being opened, an enormous quantity of fluid was evacuated, and the discharge continued several days. Doulcet, in 1763, recorded a case, in which upwards of six pints of a fluid, having all the apparent qualities of milk, were evacuated by paracentesis from the abdomen of a woman, three weeks after delivery; and De la Motte has given a still more interesting one, in which a pailful of pus was discharged from a spontaneous opening in the abdominal parietes. All these cases recovered.

this never has the elasticity, resistance, and hardness of a phlegmon, but is remarkable, on the contrary, for its softness, and occasionally even a true fluctuation, which is not always perceptible in the true abscess. Besides, there is no pain, swelling, or retraction of the limb. Of all the diseases of the iliac fossæ, *stercoral tumours* are most readily mistaken for phlegmonous inflammation. These tumours present the form of more or less voluminous masses, which are irregular and knobby on their surface, very little, if at all, painful to the touch ; they are capable of being altered much in size and character by pressure, and may diminish or disappear spontaneously in a moment under the influence of the peristaltic action of the bowels, especially after the administration of a purgative. A most interesting case is recorded in the *Archives Générales*(*a*), of a stercoral tumour which was mistaken for an abscess, and was very near being punctured as such. If long-continued, these stercoral tumours produce all the symptoms of ileus, an occurrence never observed in connexion with phlegmonous tumours, for the compression exerted by them upon the cæcum is never carried to the extent of interrupting completely the continuity of the intestinal tube.

That pelvic abscess could be mistaken for *sciatica*, as Dr. Churchill states, has occurred, seems to Dr. Lever next to impossible. An error of the kind, however, is just as likely as that of mistaking the effects of stercoral tumour for sciatica, of which an instance occurred to my knowledge some years ago. This case made a great impression on my mind at the time, and it is so instructive that I may be excused giving it in the words of my friend, Dr. Ridgeway, of Oldcastle, who has kindly sent me the following account of it:

"When called to see Mr. T., aged about twenty-one years, I learned that for some weeks previously he had been suffering from what was supposed by his medical attendant to be sciatica, and for this he had been using frequent, and repeated, doses of Pulv. Doveri. When I entered the house I could easily have *scented* my way to the bedroom of the patient, whom I found apparently with symptoms of low fever. The pulse was regular, but very slow, and equal; the tongue much furred, and very dry and brown in the centre; the countenance, and indeed the cutaneous surface, was of a peculiar livid hue; but what was most remarkable, was the strong fæcal odour exhaled from the breath, and, as it appeared to me, from the entire body. The abdomen generally was much enlarged. He particularly directed my attention to a severe pain in the right side of the pelvis, passing down both behind and in front of the femur, and through the right spermatic cord to the scrotum, and particularly to the right ischiatic protuberance; here the pain was so severe that I felt it necessary to make an examination by the finger introduced into the rectum, and then I at once became acquainted with the true nature of the case. There was fæcal accumulation in the cæcum and entire large intestine, and the rectum was so

(*a*) Tom. xx. p. 581.

enormously distended with fæces, that I am certain it could readily have contained a full grown infant's head. By means of a marrow spoon, used as a scoop, repeated enemas, &c., this enormous collection was cleared away, and in about ten days his health was tolerably well restored. Involuntary *emissio seminis* was a prominent symptom at the outset of the complaint, and still continued to annoy him for a length of time after his recovery. The pain in the thigh recurred occasionally, and was always connected with a return of the fulness of the cæcum."

The same mistake has been made with regard to pelvic abscess itself. Bricheteau(*a*) has reported the case of a young woman who had been for a length of time subject to frequent attacks of excruciating pain in the left lower extremity, from the hip downwards, which were believed to be of a neuralgic character, and were treated as such unsuccessfully. When the case appeared almost hopeless, an unexpected cessation of the sufferings took place immediately after a diarrhœa, which came on spontaneously. A considerable quantity of pus, mixed with blood, was discharged with the alvine evacuations. The disease was abscess formed in the left iliac fossa, where a sense of pain and uneasiness had been felt, the abscess bursting suddenly into the colon or rectum, and thus the pressure upon the crural nerves, giving rise to the neuralgic pain, was removed. A similar case is mentioned by Berard(*b*). It had been long mistaken for an idiopathic coxalgia, and its true nature was not discovered until a discharge of purulent matter took place from the rectum.

To distinguish between abscess of the cellular tissue of the iliac fossa, and *psoas abscess*, would be nearly impossible if all the recorded cases of the latter are to be taken as examples of it. To form a proper diagnosis, it is specially necessary to attend to the seat of the pain and the characters of the tumefaction. Thus, in the subperitoneal abscess, the pain, which is often sharp, is always increased by pressure, is generally confined to the iliac region, and there is in most cases fever, more or less intense. In psoas abscess, on the contrary, there is no fever (the abscess often appears in an insidious manner, without serious pain or attending inflammation), the patient refers whatever suffering he feels to the loins, or he may have a dull, deep-seated pain in the iliac region, which is made worse not by pressure, but by walking, and the movements of the body, which is never kept in the erect posture, but is more or less flexed on the limbs. On examining the abdomen, moreover, the tumefaction found in the iliac fossa is not

(*a*) Med. Chir. Rev. vol. xxx. p. 265; *Archives Générales*, third series, t. ii. p. 409. Andral, *Clinique Med.* t. ii. p. 722, has recorded a case of intraperitonæal abscess succeeding delivery, and seated in the broad ligaments, which was supposed before he saw it to be a neuralgic affection, the pain being of an intermitting nature, and radiating towards the neck of the uterus and abdominal parietes, and posteriorly towards the lumbar region.

(*b*) *Ibid.*

circumscribed, but in the most internal part of it there is felt a prolonged fulness, the precise seat of which, however, it is not always possible to define. Iliac abscess is sometimes so extensive that it is not always possible to decide on its limits; its ordinary size, however, is about that of a hen's egg or of an orange. The psoas abscess has no tendency to burst into the natural outlets of the pelvis, or to come forward externally at the nearest point of the skin, like iliac abscess,—but, on the contrary, to pass to a distant one. Its relations with the iliac fascia explain this. The pus of psoas abscess, being bound down by the fascia iliaca, advances slowly; and, displacing the inguinal vessels forwards and inwards, forms a more or less marked projection at the internal and anterior part of the thigh, leaving the fold of the groin comparatively free. If it pierce the partition between the iliac and psoas muscles and the pectinæus, or that between the first of these muscles and the rectus femoris, the pus may pass into the space beneath the obturator foramen; and, finding its way between the adductors, it may form a tumour below the tuber ischii. It may also escape externally between the glutæi, triceps and fascia lata, and form a prominence below the great trochanter(*a*). When the pus does not thus proceed to the thigh, it ascends to the side and the lumbar region.

The diagnosis between the subperitoneal abscess, and what is called by the French *psoitis*, or abscess seated primarily in the psoas and iliac muscles, is attended with much greater difficulties. The peculiarities of psoitis will be best conveyed by detailing a marked case of it:—"A woman, thirty years of age, was affected, soon after her tenth confinement, with severe pains in both flanks, but especially the left

(*a*) The insidious mode of development of psoas abscess, and the progress of the pus through the muscles of the thigh as above described, is well exemplified in a case at present under my care. Margaret Wise, æt. five years and six months, was brought to Pitt-street Institution in August last, with an enormously large fluctuating tumour occupying the outside and back part of the upper half of the right thigh. The limb was kept bent slightly on the pelvis; she could walk well, and had no pain whatever; was in flesh and looked healthy; there was angular curvature of the lower part of the spine of four years' standing, but this had not troubled her for a long time. The abscess had made its appearance, three months before admission, at the anterior and inner part of the thigh, in the course of the femoral vessels. It next appeared over the great trochanter, and finally protruded at the back of the thigh. She had never complained of anything but merely a weakness of the back. In the latter end of August the abscess shewed signs of inflammation, and shortly after burst, discharging a great quantity of matter, part of which was lumpy. The result, contrary to what might reasonably be expected from the inflammation of so large a sac, has turned out most favourably. The hectic fever which ensued was very mild. At the end of a month the discharge ceased, and nearly all traces of the abscess had disappeared. Her health is now good, and she is constantly on her legs. Two or three small bits of bone, of spongy texture, have been discharged from the opening, which is precisely in the centre of the back part of the thigh, just below the fold of the glutæus maximus. Mr. W. Colles, having seen this case, thinks with me, there is no doubt of these bits of bone being part of the diseased vertebræ, nor, consequently, of the case being one of psoas abscess.

one. The lower extremity on this side became so much retracted that its extension was almost impossible. The patient was feverish during the day, had night-sweats, and lost her strength rapidly. About the end of the second month after her accouchement a tumour was perceptible in the left flank. When first examined, it was soft, elastic, about as big as the closed fist, and situated equidistant between the iliac crest and the last false rib, two or three inches from the vertebral column. Anteriorly the swelling was insensibly lost in a diffused doughy-like fulness, which extended over the whole of the left flank and iliac region; and when pressure was made on the lumbar swelling, the reflux of fluid into the flank on this side was distinctly perceptible. She expired suddenly. On dissection, not only the psoas and iliacus internus, but also the quadratus lumborum muscles, were found in a state of disorganization. There were two abscesses, the one iliac, the other lumbo-dorsal, which communicated with each other, through the quadratus muscle, and the anterior and middle layers of the transversalis. The muscular debris were infiltrated with purulent matter(*a*).

The characteristics, then, of these abscesses are, that they are under the fascia iliaca, and deeply seated in the substance of the muscular fibres of the psoas and iliac muscles; and, like the psoas abscess, they are unattended by intestinal derangements, and have no tendency to come forward at the groin, but to burrow to a distance or to point in the loins, and the tumour does not project much. The subperitoneal iliac abscess, it is true, does also sometimes pursue this last route, and has been found to descend, in rare cases, through the crural ring into the thigh, in consequence of the rupture or destruction of the fascia, or of this membrane, as in children, differing but little from cellular membrane. Smith's case was of the former description. Martin has given one of this kind in a puerperal female, which pointed in the loins, and was there opened. Dance observed a similar case; Ménière another which pointed behind the crest of the ilium a little external to the insertion of the quadratus lumborum; and Vigla another, which formed a prominence in the buttock, over the glutæus maximus. Its descent along the femoral vessels has been observed by Dance (Obs. xv.), Corbin(*b*), O'Ferrall(*c*), King(*d*), and Duplay(*e*).

In like manner as the pus of the more superficial abscesses sometimes pursues an unusual course, so does that of those deeply seated under the aponeurosis escape, by the destruction or ulceration of this latter, into the pelvis, and come in contact with, or burst into, the peritoneum, bladder, or rectum, thus putting on some of the appearances of the first-named variety. Such is the case reported by Vigla(*f*), in which the psoas, iliacus internus, and quadratus mus-

(*a*) Perrochaud, *Bul. de la Soc. Anat.* Martin, l. c. p. 111.
(*b*) *Gazette Médicale*, 1830, p. 387.
(*c*) Dub. Jour. vol. xv. p. 288.
(*d*) Dub. Med. Press, December 11th, 1844.
(*e*) *Journal Hebdom*, t. ii. p. 312. (*f*) Marchal, l. c. p. 99.

cles were reduced in a great measure to a green-coloured pulp. The subaponeurotic space communicated with the cavity of the cæcum by an opening through the fascia iliaca. The abscess extended down to the crural arch, and upwards as high as the attachments of the diaphragm. The filaments of the lumbar plexus, which were ramified on the surface, or between the superficial fibres of the muscles, were of a dull white colour, and so soft that they were torn across with the greatest ease.

There is no diagnostic value in the retraction of the limb, the impossibility of extending it, or in pain being felt in the abdomen and loins on endeavouring to move it; for these, no matter what be said to the contrary, are not constant symptoms of suppuration of the psoas; while in iliac abscess retraction(*a*) is met with in one-tenth of the cases (being an indication of the inflammation having extended to the parts under the fascia iliaca), along with neuralgic pain, numbness, tingling or loss of temperature in the limb,—symptoms which all depend, probably, on compression of the nerves or of the vessels. Another local effect of the phlegmon is, that the pulsations of the crural artery of the affected limb have been observed by Grisolle to be more feeble than in the other one. If the iliac vein be specially affected, there is œdema of the ankles, or a general hard enlargement of the entire member, without any œdema, and this may continue for an indefinite period.

Prognosis.—Dupuytren did not consider the prognosis in iliac abscess very unfavourable; Grisolle is of a different opinion, for, of seventy-three cases, twenty were fatal and eleven serious; and of puerperal women so affected seven died out of seventeen. Of all descriptions of it, however, the stercoral abscess, being always accompanied by gangrene, is incomparably the most serious; for of such cases five out of seven were either fatal, or resulted in artificial anus. Gangrene is but seldom observed in connexion with the more superficial abscess, unless where this succeeds perforative ulceration or mortification of the cæcum or of its appendix, giving rise to the extravasation of fæcal matters into the cellular tissue in the vicinity. If, on the contrary, the inflammation is seated under the fascia iliaca, this may then produce a true strangulation of the inflamed parts; and it is common enough to find in these subaponeurotic abscesses, the fibres of the iliac muscle blackened, softened, and exhaling a fœtid odour; and after an incision is made into them, gas, pus, and portions of mortified cellular tissue, muscle, and tendon, escape from the opening. In such cases death is almost certain to ensue.

Treatment.—In the treatment of phlegmonous inflammation of the iliac fossæ, of course an endeavour should be made to procure its resolution. This fortunate termination is, however,

(*a*) In three of the cases recorded by Dr. Lever, the leg had all the appearances of phlegmasia dolens; and of Martin's twelve cases of abscess of the uterine appendages, in seven the leg was affected, being either swollen, flexed immoveably, or very painful.

that most difficult of attainment(*a*), more particularly in phlegmon consecutive to child-bed, although Puzos thought otherwise. The means best adapted to this end are the frequent application of leeches and poultices, blisters, and, if necessary, mercury in small doses, so as to affect the gums. Venesection, extolled by Puzos and advised by Dupuytren, when the patient is robust, should, if at all, be practised before the sixth day, and should certainly not be carried to any great extent, on account of the tedious course the disease is likely to run.

The most frequent termination is suppuration; fifty-five out of sixty-three cases ended thus. In puerperals it is almost inevitable, for sixteen out of seventeen suppurated. The formation of pus is attended with aggravation of the symptoms and rigors in one-third. When pus is formed absorption is scarcely to be expected, and it is certainly advisable to make an early opening into it, although Dupuytren was adverse to this, from observing the frequency of a spontaneous evacuation into the cæcum or large intestine, which, as already noticed, he considered the most fortunate occurrence that could happen. Yet Grisolle thinks this so far from being a fortunate one, that it adds to the danger. Thus of fourteen cases in which the abscess opened through the abdominal wall alone, two were fatal; while of ten cases in which the pus found its way through the intestines, two also were fatal. It is true that when the only opening is into the cæcum the case is one of the most favourable. Yet it is also certain, as we have already seen, that spontaneous openings into one of the natural outlets are often followed by others externally, a complication which, Grisolle states, ends fatally in four cases out of seven; moreover, there is danger of extension of the inflammation to the peritoneum, or of the abscess bursting into the sac of this membrane, occurrences, either of which would most probably be followed by speedy death. Dupuytren was averse to making an artificial opening, fearing the consequences of the ingress of air into the cavity of the abscess. This opinion, says Ménière, is just, when the delay has given sufficient time for the skin to become thinned and inflamed, for then it ulcerates more or less, and air gets into the cavity. When, on the contrary, the tumour has been emptied by puncture, while the integuments are still in their natural state, the cure is rapid, as there is then no danger of the decomposition of the pus, or of any of the severe accidents it gives rise to. On this question Velpeau says(*b*): "These abscesses should be opened early, but

(*a*) Ménière says that resolution occurred in eleven of sixteen cases; Grisolle, on the contrary, that it occurred but in two of the twelve cases that fell under his own observation; and of seventy-three recorded cases analyzed by him, there was complete resolution in nine only: nine others, however, of those are uncertain, as they left the hospital before the disappearance of the tumour, which is very slow in disappearing, the average time being about three months.

(*b*) L. c. p. 231.

before doing so it is necessary, if the patient be a female, to make a vaginal examination, for it is often possible to discover a fluctuating tumour in the vagina. If this opens spontaneously, the cure proceeds rapidly, for the abscess empties itself with great facility, and rapidly, in consequence of the very depending opening. The same may be said of the rectum. But if there be no tumour perceptible in the vagina or rectum, and there be no hope of its speedily making its appearance in these canals, do not temporize, but make an early opening in the place where the abscess is most prominent." Recamier(*a*) makes it a rule always to open these abscesses pointing in the vagina, which was the common practice of Guillemeau(*b*); and an interesting case is given in which Amussat found himself obliged to puncture, through the rectum, an abscess of the recto-vaginal septum, which had its origin, he supposed, in the broad ligament of the uterus(*c*).

Velpeau prefers opening these abscesses by simple incision with the bistoury. M. Martin, of Lyons, in his excellent memoir(*d*) on abscesses of the uterine appendages, gives the preference in such cases to caustic potash. "Having," he says, "observed that many of these depots did not form adhesions with the walls of the abdomen, but opened spontaneously into the belly, and produced sudden death, I reflected upon the means proper for producing this salutary adhesion between that portion of the peritoneum which covers these depots and the corresponding parts of the same membrane lining the abdominal cavity." Caustic potash applied to the most prominent part of these purulent collections appeared to him the most favourable means for succeeding in this; and the first person on whom he tried, and with success, the effects of this practice was no less than Her Royal Highness the Duchess of Cumberland.

The rule laid down by Velpeau and Martin, of opening the tu-

(*a*) Des Tumeurs fluctuantes du petit Bassin et deleur Ouverture pratiquée par le Vagin. Par Hippolyte Bourdon.—*Revue Med.* Julliet, Aout, Septemb. 1841, vol. iii.

(*b*) Paulus Ægineta made a practice of opening through the vagina what he calls "abscesses of the womb," which were most probably the intra-pelvic abscesses we treat of, connected with parturition. From the following description of his method of performing this operation, which M. Bourdon thinks originated with Callisen, it would appear that an instrument, almost identical in construction with the modern branched speculum, was well known in his time. Having described the proper position for placing the patient, he says, "The stalk is to be introduced, having a screw at the upper part, and the speculum is to be held by the assistant, so that, the laminæ of the stalk being separated, the vagina may be distended. When the abscess is exposed, if it be soft and thin, it is to be divided by the top of a scalpel or needle.—*Paulus Ægineta, translated for Sydenham Society*, vol. ii. p. 385.

(*c*) Compérat sur un cas d'Abscès du petit Bassin.—*Revue Med.*, Février, 1846. Simpson has given another case operated on in the same way.—*Edinburgh Monthly Journal*, No. xxxv. p. 1010.

(*d*) *Mémoires de Médecine*, 1835. "Des Depots des annexes de la Matrice qui surviennent à la suite des Couches," p. 304.

mour at its most prominent part, Professor Simpson(*a*) endeavours to shew would, if universally adopted, lead sometimes to an irreparable and fatal blunder. He gives a case of abscess, in which the most prominent part of the hypogastric swelling was formed by the uterus, which had continued abnormally in a state of puerperal hypertrophy, a condition which Dr. Lever states he observed in the greater number of his cases. This he considered himself fortunate in discovering by means of his uterine bougie, the use of which, he adds, will easily guard against such a mistake as applying the caustic or knife over the uterus instead of over the purulent cyst itself. The bougie proved useful also in another case, in which the uterus was found unaltered in size, but formed a tumour which could be felt externally; part of it had been pushed forwards (as was discovered by a combined rectal and vaginal examination) by an abscess between it and the rectum.

There can be no question about the propriety of speedily opening the stercoral abscess. The bad effects of allowing such to burst spontaneously is illustrated in the following cases, both of which were probably examples of perforating ulceration from within:—A tumour appeared in the right iliac fossa of a female; it remained indolent and without change for six months, at the end of which time she began to suffer much, and fluctuation was indistinctly recognised in one part of the tumour, which now filled the iliac fossa, and extended considerably above the crest of the ilium, as also backwards to the spine, and projected about two inches beyond the level of the surrounding parts. Dr. Macfarlane, uncertain whether the tumour was occasioned by an encysted disease of the ovary, or a chronic abscess, proposed a cautious puncture. The patient refused to submit to this; pointing and ulceration of the integuments ensued, and an immense discharge of pus took place. In three days afterwards fæces and flatus were discharged through the opening, and in eight days the patient died. It was found on dissection that a large, thick cyst occupied the right iliac and lumbar regions, and extended into the pelvis; it also surrounded the cæcum, in which there was an ulcerated opening capable of admitting the little finger(*b*). In the second case the integuments of the groin were allowed to slough in two places: fæcal matter was discharged, and the man soon sank. The abscess, which was large, was found to arise from some obstruction in the mouth of the vermiform appendix. There were three openings into the intestine, viz., one into the cæcum at the root of the appendix, one into the colon, and another into the small intestine(*c*). No delay should be made in making an opening, be the abscess deeply seated or not, if the patient is suffering much irritation from the formation of matter, and especially if he has the peculiar symptoms of a *fæcal abscess*, i. e. one containing sulphuretted

(*a*) Edinburgh Monthly Journal, No. xxxv. p. 1010, 1843.
(*b*) Medico-Chir. Rev. vol. xxiii. p. 258.
(*c*) *Ibid.* vol. xxiv. p. 567.

hydrogen either from diseased bone, fæcal abscess, or sloughs. Even in abscess arising from intestinal cancer an early opening is advisable, as this will probably prolong life, though it cannot save it.

In the deep-seated variety of abscess the opening of it should not be deferred until fluctuation be discovered; for this may be impossible, and yet the quantity of matter present be very large. Thus Bourrienne(*a*) gives two instances, in one of which fifteen ounces, and in the other a pint and a half of pus were evacuated; in neither of them was there the slightest sense of fluctuation present; in one there was merely a *frémissement* perceptible on pressure, in the other there was a little œdema. The great benefit of making an incision over, though it do not reach these abscesses, is well illustrated in a case he cites from Lamothe:—A woman for nine months suffered from excessive pains in the lower part of the abdomen; she remained night and day in the same position, with her knees touching her face, and her heels drawn back to the buttock. There was some sense of undulation to be felt; no hardness; and the colour of the integuments was natural. Lamothe, thinking there was an abscess, cut down, contrary to the opinion of the other surgeons, over it, but not the smallest quantity of pus was found. Thunderstruck with the unfortunate event, he took his departure; the other surgeons, the while, laughing at him in their sleeve (*riant sous cape*); and he ingenuously confesses that he passed the succeeding night without a wink of sleep. Next day, however, he was rewarded by a great quantity of pus coming away, and the woman recovered perfectly.

Dupuytren and subsequent writers have joined in recommending that the patient be made to lie on whatever side the opening exists, or on his belly, in order to facilitate the discharge of the pus. Methodical compression, Grisolle thinks, may be serviceable for that purpose, as well as for promoting cicatrization of the abscess. Its application, however, is very difficult, and must be, if effectual, irksome to the patient. Mr. Arnott(*b*), and Dr. Hargrave(*c*), have tried it unsuccessfully. The opening may remain for a long time fistulous. In Dr. Hargrave's case it continued to discharge at the end of two years, yet there was no evidence of the sinuses being in connexion with diseased bone. Blandin(*d*) and Grisolle(*e*), have seen herniæ pass through these fistulæ. If the abscess bursts into the peritoneal cavity, the inflammation of this sac is not to be combated by bleeding or antiphlogistics, but by large doses of opium, as recommended by Graves, Stokes, and Chomel, in intestinal perforations, and used by the former successfully in a case of abscess of the liver bursting into the peritonæum.

(*a*) *Journal Générale de Méd.* t. xliii. 1775.
(*b*) Medical Gazette, December 27th, 1844.
(*c* Dublin Medical Press, December 11th, 1844.
(*d*) Grisolle, l. c. p. 155. (*e*) *Ibid.* p. 160.

MEDICAL MISCELLANY.

A Case of Lithotrity. By Josiah Smily, F. R. C. S. I., Surgeon to the Meath Hospital, &c. &c.

The great boon which has been conferred on suffering humanity by the introduction of lithotrity, as a means of removing stone from the bladder, is very generally acknowledged. It may not, however, be superfluous to bring forward the evidence of an intelligent and credible witness, who speaks from personal experience, and bears an unsolicited and willing testimony to the efficacy of the operation, and to the "trifling inconvenience, not amounting to pain," to which he was subjected.

This case also possesses an interest from the great number of stones which had formed, and also from the circumstance that this disposition to lithic acid concretion existed in one who, though of a spare habit, consumed a good deal of animal food, and whose functions of respiration and cutaneous exhalation were ill performed.

Mr. Henry Monck Mason came under my care on the 25th of August, 1846. He was suffering severely from symptoms of stone in the bladder, which, together with a chronic cough, in a highly nervous temperament, at the age of sixty-nine, had reduced him to a very low state of flesh and strength(*a*).

Assisted by my friend, Dr. Russell, of Enniskerry, who had prepared the urethra, by occasionally passing a large sound, I proceeded on the 25th (having injected four or five ounces of warm water into the bladder) to break the stone with Weiss's screw lithotrite, using one having the "slaught," as suggested by Sir P. Crampton. A stone, measuring three-eighths of an inch in diameter, was immediately seized and broken; three other stones, or fragments, were afterwards caught and treated in the same way. In examining the detritus, the result of this sitting, three nuclei, the largest the size of a pea, evidently the centres of separate stones, were found. Feverish excitement, which lasted twenty-four hours, followed this operation. Mr. Mason passed a considerable number of fragments next day, and continued to do so occasionally for three weeks after.

October 14th.—The second sitting took place, but it is unnecessary to relate the particulars of each operation; it may be sufficient to say, that the fear of bringing on fever prevented our doing much each time, and consequently, there were fourteen sittings in all, there having been so many stones, some of which must have

(*a*) For the previous history of this case I refer to the patient's own statement, merely saying that the small stones passed in the early stage of the complaint, and the fragments analyzed after the operation, were composed chiefly of lithic acid.

passed down into the bladder in the course of our proceedings, and consequently increased the number of our operations. For example, the last or fourteenth operation was performed on the 21st of March, to break a small stone which Mr. Mason says he was conscious of having had in his bladder only ten days.

That there were a number of stones to deal with may be presumed from the circumstance of Mr. Mason having passed nineteen before he came under surgical treatment. This appears more manifest from having found ten perfect central nuclei in the detritus, and also from the want of proportion between the large amount of detritus evacuated and the measurement of the largest stone broken.

In some of the sittings, a lithotrite without a slaught was employed, and found useful in extracting fragments. On one occasion the crushing of the stone was greatly facilitated by using the excentric wheel adapted to the lithotrite by Sir P. Crampton; this wheel is peculiarly suited to breaking small fragments which will not yield to the pressure of the thumb. It is readily adjusted to the instrument, and acts by driving the upper or male blade of the lithotrite home into the *slaught*, on making a half turn on an axis; this manœuvre is effected in one second, and saves the time spent in making the several rotations of the screw, which are necessary to close the instrument in the usual way.

The following is Mr. Mason's own account of his case:—

"*King's Inns, Henrietta-street, March* 10, 1847.

"My dear Smyly,—As I have every reason to believe that since Friday last there has not been the least particle of detritus remaining in my bladder, I send you all that has been extracted or passed since the commencement of our operations in August last; there are about two dozen papers, containing the result of each operation, and what came away in the intervals. I think I may say that nothing is lost, as I thought it might be useful to preserve them for you. I am most anxious that my case should be relied on as strongly advocating the value of the lithotritic operation; and I can never be sufficiently thankful that such a remedy should have been discovered,—so simple, so gentle, so efficacious,—before I was afflicted with this irritating and dangerous disease; for, as I consider that in fourteen months I passed upwards of fifty small stones, at different times, some of which would never have come away of themselves, I do conceive that I never could have been a proper subject for lithotomy, even if at my age (sixty-ninth year) I could have borne it.

"You will, of course, desire to know some particulars of the early part of my case. When I was first affected in the kidneys I cannot say, for I have never had the slightest sensation in them, or in the passage to the bladder. In the first week of January, 1846, I was annoyed in the bladder, and found driving and walking disagreeable. I then called on Sir H. Marsh, and on January 10th was enabled to bring him three small stones which I discovered in my

urine, and which he got analysed. From that time I passed several, and was affected with great teasing, and often with pain, until about the middle of April, when I passed the nineteenth calculus from the time I commenced observing them. In April I began to be annoyed by one of a larger size than the rest, which continued tormenting me until I sent for you to come to me to the county Wicklow. I was in daily hopes that the calculus would pass of itself, and was thus induced to procrastinate. This delay of mine was a great mistake, and arose in part from my not being able to go to Dublin. I hoped as three weeks had passed between some of the other calculi, this one would make its way at last.

Our first operation was on August 25th. I was kept too long again, by ignorance and vain hope, expecting the detritus to pass, until October 7th, when I saw you again. The remaining operations were October 23rd, November 12th, December 11th and 26th; the next, some day early in January; the eighth was on February 17th, and the other five on February 20th, 22nd, 25th, and 28th, and March 5th.

"In August and October I was affected by fever after the operation, and had rigors, but did not suffer at all from pain during it; at least, it was felt in a very trifling degree. My nerves, it would appear, got somewhat used to the operations, and the last six operations were performed in seventeen days.

"I think it right to add my testimony to the necessity of absolute rest; and I would add, to persons similarly afflicted with me, not to lose a moment in ascertaining whether their case be one for lithotrity, and receive the great blessing of its relief the moment the professional adviser thinks it right. They must also make up their minds to the probability of more sittings than one, but they may be undergone with a pain and inconvenience not worth dwelling on. I have to give you thanks, my dear Sir, that these have been reduced almost to nothing in my case, by the tenderness and skill with which you have uniformly treated it. As I am a very nervous person, I felt the great value of being able to rely on these in a surgical operator, and certainly I *felt* that I might rely on your's to the very fullest extent.

"I am, Sir, &c. &c.
"H. Monck Mason."

[The public and the profession cannot too highly estimate the generous feeling which prompted Mr. Mason to afford the foregoing testimony to the value of lithotrity in his own person. The whole amount of detritus and calculi which came away weighs four drachms.—Ed.]

Two Cases of Injury of the Head. By Samuel G. Wilmot, M. D., F. R. C. S. I., Resident Surgeon, Steevens' Hospital.

James Kelly, aged 42, was admitted into Steevens' Hospital at twelve o'clock on the 18th day of September, 1846, as a patient of Mr. Wilmot; he labouring under the combined effects of concussion and compression of the brain in a marked degree.

About an hour previously, a bank of clay, on which he was working, suddenly gave way, and precipitated him to the ground with great force. On admission the pulse was 39, laboured and intermittent; respiration stertorous and prolonged; extremities cold; pupils rather contracted. There was complete loss of intelligence; paralysis of right side, and diminution of sensibility over the entire surface: when pinched he evinced some perception of pain. Over the left supra-orbital ridge there appeared a tranverse wound, through which a fracture (apparently only through the external table of the bone) could be felt with the nail. The eye of the same side was pushed so far forward as almost to prevent the separation of the lids. At five o'clock, p. m., the pulse was 70, became fuller and stronger, and lost the intermission. The symptoms of compression continued; the wound was dressed, and a turpentine enema administered.

September 19th, nine o'clock, a. m.—Pulse this morning is 108, rather full, and without intermission; the symptoms of compression persist without alteration; he is able to swallow fluids; the wound was dilated to ascertain the extent of injury to the bone, when a triangular fracture, of small extent and undepressed, corresponding with the frontal sinus, became apparent. During the operation the patient was seized with a kind of fit, and his pulse fell considerably. From the result of the examination it was conjectured that the symptoms were caused by an extravasation of blood over the left hemisphere of the brain, with fracture of the base of the cranium.

September 20th, ten o'clock, a. m.—Coma is still present; pulse quick and small; surface warm and moist; passes urine and fæces involuntarily.

Four o'clock, p. m.—An intermission is now perceptible in his pulse.

September 21st.—He died this morning at six o'clock.

Post Mortem.—On detaching the scalp, blood was found over the right frontal protuberance, which externally presented no appearances of contusion. The calvarium was then removed; no blood appeared outside the dura mater; but on slitting up this membrane there was seen a thin layer of coagulated blood, extravasated beneath the arachnoid membrane, over the entire left hemisphere of the brain, thicker anteriorly about the site of the fracture than elsewhere. There was also blood at the base of the brain, in front of the

pons Varolii; and on the under surface of the left anterior lobe, for a short distance around the olfactory nerve, the substance of the brain appeared disorganized. On the removal of the brain the fracture was brought fairly into view; the triangular fracture, already alluded to (the apex of which was above), was now found to include the prominence situated over the left frontal sinus. The right side of the triangle could be traced traversing the os frontis, immediately anterior to the crista galli of the ethmoid bone, and extending along the right orbital plate, in the centre of which it terminated; the left side of the triangle was short, and ran into the supra-orbital notch. Through the entire extent of the left orbital plate another and distinct fracture was discovered; this ran obliquely from without and before, backwards and inwards, to the cribriform plate of the ethmoid bone, which, however, was uninjured. There was no portion of this extensive fracture was found to have been depressed. Some blood was extravasated into the left orbit.

John Pertens, aged 44, was admitted into Steevens' Hospital on the 24th of September, 1846, under Mr. Wilmot.

From the statement of his wife it appeared that, while arranging some part of the work of a machine for beating out iron, he was struck on the left side of the head by a hammer weighing five cwt., which had been accidentally caused to revolve, by letting the water which worked the machine suddenly fall on the fly wheel. He lay insensible for twenty minutes, during which time he was convulsed, and was observed to bleed from both ears. An hour after the accident he was admitted into the hospital. At this time he was quite sensible, spoke and answered questions rationally, and assisted in undressing himself; he appeared to suffer little pain, and was free from any of the symptoms of compression; pulse 40, rather small; pupils natural, and obedient to light. On examination of the injury there was observed a large, compound, depressed fracture on the left temple, including a portion of the frontal and parietal bones. At half-past one o'clock a consultation was held, when the elevation of the depressed bone was determined upon. On enlarging the wound, fully an inch of the posterior and inferior part of the frontal bone, about where the temporal ridge is observed, was found broken off, driven down, and fixed tightly, being overlapped by the adjoining bones: a little more inferiorly a large portion of the parietal bone was depressed. With Hey's saw a longitudinal piece of bone, about one-quarter of an inch in breadth, which overlapped the detached portion of bone, was removed, and by this means the extrication of the small detached piece, and the elevation of the large depressed bone were easily accomplished. A large quantity of coagulated blood lay on the dura mater, which had been exposed, and the hæmorrhage was very considerable; the middle meningeal artery was apparently uninjured. The wound was simply dressed with lint.

Nine o'clock, P. M.—Continues perfectly sensible, and gets up to

make water; complains of his head but slightly; he is inclined to slumber; pulse 100; thirst considerable.

September 25th.—Remains still quite sensible and rational; there are no signs of paralysis except on the right side of the face, the mouth being drawn to the left. This is probably caused by injury to the portio dura nerve, from a fracture of the petrous bone; thirst is urgent; tongue dry, with a brownish fur in the centre; tip and sides red; bowels regular; pulse 76; ordered ten grains of calomel, and James's Powder every fourth hour.

Nine o'clock, P. M.—The pulse is 100, weak, with a tendency to intermission. During the day it was very variable, ranging from 76 to 94.

September 26th, nine o'clock, A. M.—Slept well; pulse 78; tongue more furred; thirst; complains more of an uneasiness than actual pain in the head. The dressings were removed this morning; the parts beneath shewed no disposition to suppurate, but were quite black, and had an offensive smell.

Nine o'clock, P. M.—Pulse is still variable; it exhibits remarkable changes in a short time; ranges from 80 to 100.

September 27th.—His gums are slightly affected by the mercury; pulse varies from 80 to 100; is rather weak, and inclined to intermit: to continue mercury.

September 28th, nine o'clock, A. M.—Had a tendency to delirium, for the first time, last night; pulse 98.

Nine o'clock, P. M.—Pulse is 120, frequently intermitting; during the day it varied greatly at very short intervals. No departure from the numerical relation between the pulse and respiration observed in health has as yet been recognised.

September 29th.—The wound looks better, but still exhibits a sloughy appearance. To be dressed with "warm dressing." He has been purged severely all night, and for a part of yesterday; pulse 120, intermitting; ordered compound chalk powder, with aromatic spirit of ammonia and cardiac mixture.

Nine o'clock, P. M.—Diarrhœa is still present; thirst urgent; pulse 90, very weak, but intermits less frequently.

September 30th.—Pulse varies from 90 to 120, and is very weak; tongue dry and brown; he still calls loudly for drink; diarrhœa is slightly checked; has had several imperfect rigors during the day: the mixture was repeated, and he had two ounces of wine.

October 1st.—The purging has almost ceased; pulse 100, more regular; his attendant says he had several slight rigors during the night, and was at times delirious. To day he is quite sensible. The right eye has become prominent and suffused. The mercury, which had been stopped on the occurrence of diarrhœa, was ordered to be resumed. The wound looks cleaner; the sloughy condition is disappearing.

Ten o'clock, P. M.—Pulse is from 120 to 130; he is delirious, but not very violent; he makes efforts to get out of bed, and tear the dressings off the wound.

October 2nd.—There is ecchymosis of the right eye; diarrhœa has returned; tongue dry and brown in the centre, red at the tip and edges, tremulous when protruded; pulse 120: ordered an anodyne enema.

October 3rd.—Diarrhœa has ceased; pulse 110, intermitting and weak; the wine to be increased to eight ounces. There is some appearance of suppuration about the wound, but it still looks unhealthy.

October 4th.—He was delirious during the night; complains of his head; pulse 130, very weak.

October 5th.—He lies in a semi-comatose state, and upon being roused answers questions incoherently; there is slight subsultus observable. Pulse above 130, with several intermissions.

The wound looks better, the portion of soft parts around the bone is suppurating, and the denuded bone itself is presenting a vascular appearance.

October 6th.—Ten o'clock P. M.—Has just expired. Since last report he has been in profound coma, his urine and fæces have been passed involuntarily.

Post Mortem.—On detaching the scalp from the left side, the fractured portion of bone which had been elevated was found to be a part of the anterior and inferior portion of the parietal bone, about the size of half a crown, of a square shape, completely detached, but in no way pressing on the brain. The dura mater was detached to a considerable extent around the fracture, blood intervening between it and the bone. On exposing the superior surface of the brain, traces of adhesive inflammation were observed equally over both hemispheres. On the left side, corresponding with the site of the injury, and lodged rather deeply in the anterior lobe, was found a small quantity of pus, the surrounding part being perfectly disorganized. The base of the brain presented many spots of lymph, but inflammatory marks were not so extensively diffused as over the hemispheres. On separating the dura mater from its attachments to the base of the skull, a very extensive fracture was brought into view. This fracture commenced about the posterior half of the left orbital plate, ran through the entire thickness of the body of the sphenoid bone, and could be traced extending obliquely along the right petrous bone. A small quantity of lymph was discovered in the right orbit.

These two cases contrast remarkably with each other. The first is one of many, in which there is found a remarkable disproportion between the extent of the external and internal mischief. It ran a very rapid course to a fatal termination, the symptoms of compression continuing to the last. The results of the *post mortem* examination fully proved the correctness of the opinion relative to the nature of the injury formed during the patient's life, and shew the perfect inutility of having recourse to operation in such cases.

The second case is highly interesting, as it demonstrates that even considerably depressed bone is not necessarily productive of

symptoms of compression, and is quite compatible with the preservation of intelligence. Having operated where the symptoms of compression were absent, may appear a violation of a rule in surgery; but where a bone driven down on the brain admitted of removal in a manner so much more easily and less injuriously than the employment of the trephine, and that thus was prevented the probable supervention of symptoms demanding the operation at a period more unfavourable for its performance, as well as the remote bad consequences in cases of recovery, where the bone has not been elevated, I think the plan adopted in this case was unquestionably advisable. The unfavourable termination of the case could be in no way attributable to the operation.

A Case of Laceration and Separation of the Iris, with Amaurosis in both Eyes, from Injury. By W. White Cooper, F.R.C.S.E., Senior Surgeon to the North London Eye Infirmary.

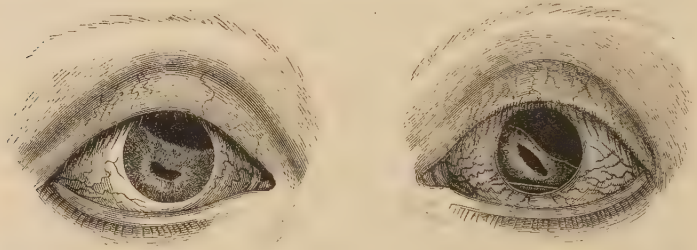
Ambrose Carter, aged 32, a hale-looking countryman, possessed excellent vision, and never suffered in the slightest degree from any affection of his sight, until he received a heavy blow on the right eye, whilst engaged in a pugilistic encounter, in the month of September, 1844. Vision was at once extinguished, and violent pain felt in the globe. It is probable that blood was poured freely into the anterior and posterior chambers, as he stated that, for many days after the infliction of the injury, the eye was "one mass of blood." Leeches and poultices were applied, and fomentations freely used. The pain was for three days very severe, not only in the eye-ball, but in the frontal and temporal regions; it then gradually subsided. It was difficult to ascertain in what time the effused blood was absorbed, but probably in about ten days. Vision, however, did not return as the effects of the accident passed away, and the eye has since been useless.

In the first week of January in the present year, whilst he was engaged in felling timber, a fragment glanced from the axe, and struck his left eye with great force. Blindness instantly followed; he suffered intense agony, and the chambers of the eye were filled with blood. The poor fellow was led home, the eye fomented, and leeches applied to the temple. For several days and nights he suffered acutely, and although he could not discern any object, the pain was aggravated by the least light. After the expiration of a week, his sufferings diminished, and when a fortnight had elapsed, pain was only felt occasionally, and principally during the night.

I saw him on the 9th of February. Upon examination of the right eye (that injured in 1844), the upper third of the iris was seen to be detached from the corpus ciliare superiorly, leaving a considerable gap, through which the dark pigment behind was visible. The iris (which was blue) was not unhealthy in appearance, but tremulous, indicating paralysis of its nerves. The pupil was col-

lapsed, of an elliptical figure, and below its natural level. The globe felt soft, and there was not the smallest perception of light.

The left eye bore evidence of still more serious injury than the right; the iris had been torn from its ciliary attachment through nearly half of its extent superiorly, and inclining towards the temporal side. The membrane itself was dull-looking, discoloured, and surrounded by a pink zone of vessels in the sclerotic; the pupil was elliptical and distorted. A small dark coagulum appeared at the bottom of the anterior chamber, the remains, doubtless, of the blood which had been effused at the time of the accident, as shewn in the accompanying illustration; there was also some congestion of the



conjunctival vessels. The patient was unable to discern my hand when passed before the eye, but there was considerable intolerance of light. Exposure to much light caused pain in the eye-ball, and the appearance of a fiery red glow, which the man complained of, as being exceedingly distressing.

With regard to the right eye, it was evident from the history of the case that, exclusive of the injury to the iris, paralysis of the retina had taken place, probably the immediate result of the blow. From the aspect it presented, no feasible hopes of amendment could be held out.

It appeared to me also, that the singular mischance which had completed the blindness of this unfortunate man,—the blow upon the left eye,—had not only torn the iris from its attachment, but had also, in a great degree, if not entirely, paralysed the retina of that eye. There was evidence, also, of subsequent inflammation of the internal tissues as well as of the iris, rendering the case more complicated, and the expectations of recovery fainter.

Taking all the circumstances into consideration, I deemed it prudent to order eight ounces of blood to be taken from the left temple by cupping, and to place the patient under the influence of mercury; prescribing two grains of calomel, the third of a grain of opium, and the sixth of a grain of tartarized antimony every six hours. On the fourth day the gums became affected, and the eye was less distressed by light. A blister was applied behind the right ear, and the mercury ordered to be continued in reduced doses. On the tenth day a manifest improvement was apparent; all pain had subsided, the iritic zone had disappeared, and the into-

lerance of light had nearly passed away. I was, moreover, pleased by finding that there was a slight return of vision. I deemed it right to continue the mercurial treatment, against which, however, the friends of the patient strongly protested. To my great disappointment the man was removed from under my care, and taken back into the country, so that I have since lost sight of this very interesting case, but the foregoing history, together with the illustration, appears to me to possess sufficient interest to be laid before the profession(*a*).

A Case of Popliteal Aneurism, the Sac of which had been punctured. Reported by R. R. Gelston, M. D., Surgeon to the County and City of Limerick Infirmaries, &c.

James O'Brien, a delicate, leucophlegmatic-looking man, aged 36, was admitted into the county Limerick Infirmary, under the care of the senior surgeon, Doctor Wilkinson (with whose permission the case is reported), on Thursday evening, December 10, 1846, with a tumour in the right ham fully the size and form of a goose egg, and occupying the entire of the popliteal space. It was more prominent at its upper and outer side, where an opening had been made with a lancet, on the Tuesday previous, by a country practitioner, which operation, he says, was followed by slight bleeding; a bandage being applied, he was advised to come into the Infirmary.

The swelling commenced with slight pain in the ham, six months previously, at which time a kernel, not larger than the common garden pea, was recognised, painful on pressure, under which it disappeared. Since then it has gradually increased to its present size. The surface of the tumour is of a purple reddish colour, without any pulsation, and on examination with the stethoscope, we could not detect any soufflet; under moderate pressure it is quite compressible, but on its removal it rapidly resumes its original form and bulk. Complains of some pain in the ham and leg, which is slightly swollen; the foot is œdematous, and of a mottled white colour; the entire limb is flexed on the pelvis; the femoral artery acting most violently; pulse 100 in the minute; tongue soft, white, large, and flabby; had been of intemperate habits, but is a strict teetotaller for the last six years: the heart and all the large vessels are in a normal and healthy state. He is of independent circumstances, and never worked except for his amusement. After we had made the examination which enables me to give this

(*a*) In the Ophthalmic Report contained in our last Number we related a case of Mr. Dixon's, in which the lens, as well as the iris, was said to have been torn out of the eye by an accident. In our remarks upon the case we doubted the fact of the lens and iris having been lost in the manner described; but Mr. Dixon has just furnished us with a very beautiful drawing, which, as far as a drawing can do, compels us to acknowledge the justness of Mr. Dixon's diagnosis. It is altogether a most curious case; we shall refer to it another time.—Ed.

description of his case, Dr. Wilkinson, in consultation with Dr. Russell and myself, came to the conclusion that it was a popliteal aneurism, into the sac of which an opening had been made; and while we were canvassing, in an adjoining ward, the propriety of interfering or not with the case, we were hastily summoned by the nurse, who stated that he was bleeding to death. On reaching his bed-side, we found him quite faint, with a large jet of blood coming *per saltum*, in a full stream, through the external wound; this occurrence was, in all probability, expedited by our examination, and the long journey on a common car; but, I think, fortunately so for the poor sufferer, for had the hæmorrhage set in at night he would have sunk ere assistance could have been rendered, the bleeding being so violent as to shoot across a large and roomy ward. It was restrained by pressure with the finger on the external opening, and a tourniquet was applied, and we again consulted as to our line of treatment. We conceived that amputation of the limb was the only safe course to adopt, but which view was opposed by a medical gentleman present, who advocated the tying of the femoral in Scarpa's space, which we dissented from, on two grounds. In the first place, we contended that the femoral artery was in all likelihood so diseased, that the obliteration of its canal could not take place, and secondary hæmorrhage would follow, either at the part where the ligature was applied, or where the sac had been opened; it being, in fact, now circumstanced like to a wounded vessel, in which a ligature is of little use, unless applied at the bleeding points; and that, were we to follow his advice, of tying it at a distance, the collateral circulation would in a short time be restored, and hæmorrhage from the sac, through the opening, would be the result. Our second reason was the dread of mortification ensuing before the collateral circulation had sufficient time to become fully established; but this was looked upon as minor in point of magnitude to the former, from the length of time which the aneurism took to form, consequently allowing the collateral circulation to be more or less established.

The limb was taken off without removal from his bed, by the flap operation, the flap being formed from the anterior and posterior aspect of the thigh; it was quickly done, scarcely three ounces of blood lost, and we had only three vessels to secure.

December 12th.—He passed a tranquil night; stump cool, and looks as if uniting; tongue clean and moist; bowels free; no pain; pulse 90, somewhat full.

Four o'clock, P. M. same day.—Stump tumified and painful, with frequent startings; pulse 108; more feeble; surface of body rather cold.

Ten o'clock, P. M.—Smart bleeding from the outer angle of the wound; is extremely anxious and much dejected; pulse 120; the swollen state of stump diminished. Dr. Wilkinson broke up some adhesions which had formed between the flaps, and laid the entire surface of the stump bare; applied cold and compression, which,

however, proved inadequate in restraining the hæmorrhage, when he then searched for the bleeding points, and secured two moderately-sized vessels with ligatures.

13th, ten o'clock, A. M.—Pulse 124 ; very feeble ; surface of body covered with cold, clammy perspiration ; considerable jactitation; raving, and made attempts to get out of bed; no recurrence of the bleeding; seems to be sinking; to have one ounce of red wine, and to be repeated, if necessary.

Eight o'clock, P. M.—Pulse 140 ; not so feeble; heart's action violent; not in proportion with the radial pulse; the stump, which was left open and lightly dressed, is now suppurating; taking wine and broth at intervals; thirst very great.

14th.—Passed a good night; tongue moist; bowels free; pulse 130; more steady; heart's action less violent; stump looking better, and suppurating freely; a light poultice of linseed to be applied ; the limb, up to the groin, much swollen ; wine and broth, with arrow root, to be continued.

15th.—In all respects improved; pulse 120, full; wine to be omitted; broth and arrow root to be continued; pulsation on the face of stump, hitherto very great, is much diminished. No material change from this until the 20th, when an abscess, which had formed in the groin, was opened, and a quantity of healthy pus discharged; one ligature came away; edges of stump brought accurately together with adhesive plaster.

23rd.—The remaining ligatures came away this morning; pulse 90; continued daily to improve; stump quite united on the 30th. He was discharged from the hospital on the 30th of January, 1847, at his own request, the stump being nearly healed.

On cutting into the sac, we found it filled with fibrine, deposited in laminæ, each layer being of a lighter colour than the one preceding; as firm (if not more so) as muscular fibre, and which accounted for the want of apparent pulsation in the tumour, and lead us to think that the aneurism was in progress of cure by nature. The opening, which communicated with the sac, was situated in the articular surface of the popliteal artery, but a little towards its outward margin.

Cases in Surgery—Injuries of the Abdomen. By T. Purefoy, M.D., Cloghjordan.

Severe Contusion of the Abdomen ; Treatment ; Recovery.—J. F., aged 35, slightly made, of sallow complexion, and intemperate habits, was kicked by a horse, with both the hind feet, in the epigastric region, and with so much force that he was knocked down, and lay insensible for a short time. In about three hours after the injury was received, most distressing pain came on in the epigastrium, accompanied with an urgent desire for cold drinks, which were swallowed greedily, and as quickly returned by vomiting. The features were contracted; face very pale, and the coun-

tenance expressive of acute suffering; the whole surface of the body cold and clammy; pulse 90, small and soft; respiration short, hurried, and painful in its performance; abdomen not tympanitic, but the pain in the epigastrium much aggravated by pressure. The state of general suffering is so intolerable that the patient cannot remain in any settled posture, but walks constantly about his room, with the body bent forwards, whilst he makes pressure with both hands over the abdominal parietes, apparently with a desire to restrain the action of the abdominal muscles as much as possible.

Treatment.—Calomel and opium, in small doses, at short intervals, but each dose was rejected by vomiting, soon after being swallowed; warmth to the feet, turpentine fomentations, emollient enemata, and cold spring water, in spoonfuls, at short intervals.

In twelve hours after the occurrence of the injury, slight reaction had set in; pulse 104, small and hard; surface warm; pain less severe, but the tenderness on pressure continues in the epigastric region, with slight tympanitis. Twelve ounces of blood were taken from the arm. Syncope threatening, and slight convulsive movements of the limbs coming on, the arm was now bound up; twelve leeches were applied to the epigastrium, and an enema given. On the following morning the symptoms were improved; he had slept a little; passed a quantity of reddish-coloured watery fluid from the bowels, with decided relief, and says that he is much better. The blood taken from the arm is neither buffed nor cupped; thirst continues, with occasional vomiting and epigastric tenderness. On the third day after the accident had occurred, as the pulse again rose, and the general symptoms seemed to indicate the necessity for doing so, he was again bled from the arm, to about ten ounces, with benefit, but neither was the blood now drawn buffed nor cupped. Purgatives were abstained from for some days, when a small dose of castor oil and laudanum was given; and from the fourth day of treatment the amendment was progressive to complete recovery.

Contusion of the Abdomen; Death; Post Mortem Appearances.—P. D., aged 30, strongly made, healthy, and of regular habits, was kicked by a horse just above the pubis; was not knocked down, but immediately after receiving the injury he threw himself on his face, exclaiming that he was killed. In a little time he complained of most distressing pain and soreness in the injured part, which symptoms were much aggravated by every movement of the body, so that he lay constantly upon his face, with a view to make pressure generally over the abdomen, which served in some measure to mitigate his suffering. In three hours after the accident had occurred, vomiting came on, accompanied with thirst, nausea, and symptoms of collapse, as in the preceding case. The pain increased in severity; pulse became small and thready; cold perspiration bedewed the body; whilst the powers of life quickly failed, and the poor sufferer expired in about thirty hours from the time of receiving the injury. The treatment was in every particular directed to

soothe pain, and sustain the vital powers until reaction should set in, but proved wholly unavailing, as the system never recovered from the severe shock occasioned by the injury.

Post Mortem Appearances.—Tympanitis, with œdema of the abdominal parietes. The lower portion of the omentum, and the surface of the small intestines occupying the pubic and iliac regions, were intensely congested, the convolutions very slightly adherent by means of soft, reddish-coloured lymph; the congestion was limited to that portion of the intestinal surface which was in contact with the abdominal parietes. The pelvis contained nearly two pints of a dark, reddish-coloured, serous fluid, in which there floated small, soft, yellowish masses, consisting apparently of recently-formed lymph. No rupture of the intestines could here be discovered, *nor was there any external mark of violence in either case.*

Both of these cases serve to establish an important fact in medical jurisprudence, which is this : *That a severe external injury may produce internal inflammation of vital organs, and so cause death, whilst there does not appear any outward mark of violence.* I include both cases in making this inference, since the injury sustained in each was exactly similar as to outward circumstances; and although one ended favourably, yet there existed symptoms of severe internal organic disease in this case, exactly resembling these observed in the case which proved fatal, and yet, in neither instance did there appear any traces of external violence.

The treatment of such cases must always require much care and discrimination ; for while, on the one hand, inflammation is to be guarded against, and combated in its earliest stage, a state of collapse immediately follows the injury, requiring a restorative and soothing plan of treatment, and forbidding the use of antiphlogistic treatment in any form, until reaction is established. In the first case, reaction arose, and was met by an appropriate treatment; indeed, the bleeding should alone be considered of efficacy here, since any medicines previously given, such as opium, calomel, or effervescing draughts, were not retained by the stomach; even the coldest spring water, taken in small quantities, was very quickly rejected. Although venesection was clearly indicated, and proved decidedly beneficial, it was remarkable how small a quantity sufficed to subdue the urgent symptoms, and how badly even this loss was borne, since the patient was threatened with epileptic convulsions after he had lost about twelve ounces of blood. Whether this inability to bear the loss of blood arose from any peculiarity in the nature of the inflammatory action, or from a bad state of the constitution induced by intemperance, it is difficult to say.

In the second case reaction did not occur, and although pain, abdominal tenderness, thirst, restlessness, and vomiting, quickly followed upon the injury, yet the feebleness of the pulse, coldness of the surface, and symptoms of prostration of the vital powers, were so decided as entirely to contra-indicate either general or local bleeding. A warm bath, opiates, and the other means usual under

such circumstances, proved unavailing, and the patient sunk without any symptom arising which seemed to call for a more active treatment. And now, what were the appearances found after death? They were decidedly such as must have resulted from inflammation,—inflammation, it is true, of a modified and peculiar character, but yet may it not be said that this inflammatory action tended to destroy life?

Here, then, an important fact is proved, namely: *That even whilst urgent symptoms of collapse continue, inflammatory action of a peculiar character may arise, and go on to a fatal termination.* The question next arises, how is the existence of this inflammation to be detected during life, and how is it to be treated?

The existence of inflammation in the preceding cases was indicated by pain and acute tenderness in the situation of the injury, accompanied by thirst and vomiting, to which was superadded, in the first case, *symptomatic fever*, which served as a guide in the plan of treatment pursued; but as no symptoms of fever or reaction were observed in the latter case, the indications of an appropriate treatment were much more obscure: and in my mind, if some of the talented contributors to this Journal would consider this subject, and give their opinion and advice upon it, they would confer a boon upon the profession. For my own part, after witnessing the symptoms, progress, and termination of the second case, I felt inclined to think that a modified antiphlogistic treatment might have been advantageously employed under the circumstances; consisting in local bleeding, or, perhaps, blistering, with opium, alone or combined with calomel. Can it be supposed that in the fatal case, the small intestines suffered more from external violence, being crushed against the spine and pelvis, than did the stomach, which, being a large and hollow organ, and perhaps distended by gas, offered a less formidable resistance.

The Ether Inhalation.

We regret to say, that our fears with respect to the general employment of his agent, contained in our last Number have, in several instances, been verified. Several deaths, caused either directly or hastened by the inhalation of the vapour of sulphuric ether, have lately been recorded, and the journals that were at first loudest in its praise have recently assumed a very cautious tone on the subject.—Ed.

ILLUSTRIOUS PHYSICIANS AND SURGEONS IN IRELAND.

No. IV.

JOHN RUTTY, M. D.

It has been often remarked, how unjustly fortune acts in the disposition of her favours amongst the members of the medical profession, and how frequently prosperity is withheld from sterling merit, while it appears, in some instances, to be capriciously and profusely granted to the undeserving(*a*). The same remark may be applied with perhaps still greater justice to the reputation awarded by posterity to the cultivators of medical science. In how many instances have the real labourers in science been not only unrequited during life, but forgotten after death? That this should very generally happen to those engaged in the service of that untutored and ungrateful master, the Public, is no more than what is to be expected by all who consider the materials of which that Public is composed. But it is surely matter of reproach, when the members of our enlightened profession, suffer the unrighteous verdict of the world, in a matter which concerns them, to be recorded without appealing against it; and this they do when they permit the memory of the true cultivators of medical science to pass away into oblivion, without, at least, testifying their sense of the debt due to them as benefactors and instructors of mankind. The plan which has been carried into effect in this Journal, of publishing memoirs of the physicians belonging to this country, is, indeed, no more than an act of justice too long deferred; and this is more peculiarly the case in those instances where to the merits of the physician are to be added the virtues of the man. In the character of Dr. John Rutty, whose memoir we are now about to trace, we shall find an unceasing ardour in the advancement of science, combined with an endeavour to attain to the highest order of moral excellence. Such a character is not alone our property; it belongs to mankind: and in endeavouring to disinter the particulars of his life and labours from the obscurity and oblivion in which they are now nearly lost, we feel that we discharge no less a duty to the present race of his professional brethren, than to that country for the illustration and improvement of which he so long and so faithfully laboured.

Dr. John Rutty was born on the 25th of December, 1697. The place of his birth we have not been able with certainty to ascertain; but it appears to have been in some part of Wiltshire, where his family was settled; neither are we informed as to the occupation of his father. He appears to have been born and educated among the Quakers; and relates in his Diary, that, after being from his

(*a*) We are indebted to our learned friend and contributor, Dr. Jonathan Osborne, Professor of Materia Medica to the School of Physic, for the materials of this interesting memoir of Dr. Rutty.

thirteenth to his eighteenth year at various mixed schools, "among aliens, living as without God in the world, intent all the while on his learning," he was about his twentieth year transplanted to "a family of Friends." There some inclination to marriage was "overruled by a secret hand," and he continued a bachelor to his death. About his twenty-second year he removed to London, and, most probably attracted by the celebrity of Boerhaave, went to Leyden, where he graduated. His Diary states his object at this time "was all nature and physic, also serious thoughts of proper qualifications for a livelihood, as he had scarce any patrimony."

In 1720 he wrote a paper in the Philosophical Transactions upon Spina Bifida.

In 1724 he came to Dublin, and in 1729 was enrolled as a licentiate of the King and Queen's College of Physicians. For above twenty years after his arrival we are uninformed as to his practice in the profession; but from the commencement he kept a regular diary of the weather, and, at the same time, "opened a scheme for the improvement of the Materia Medica," to which branch of medical science he was peculiarly devoted throughout the entire of his long career.

His first publication was a new edition of Wight's History of the Quakers in Ireland, with a continuation of it from the year 1700 to 1751; and to this he subjoined a treatise on the discipline exercised in that Society, which appeared in quarto in 1751.

In 1753 he began to keep a Spiritual Diary, which was published after his death, and has afforded us an insight into his character, not usually accorded to the writers of biography. It is remarkable for its quaintness of expression; and passages frequently occur, well calculated to provoke a smile; but its rare and distinguishing excellence is its honesty. He spares not himself, nor does he, as is the case in so many modern productions of this class, reap a rich harvest of pride out of assumed humility, or affect to labour under peculiar weaknesses, which all turn out to be so many cardinal virtues, or Christian graces, in disguise; on the contrary, we find him minutely dwelling upon his faults, with a view to their rectification, and to his greater advancement towards that religious perfection which was the object he constantly held in view. In his will he directed this work to be published; and in a short preface, after alluding to the restraint imposed on St. Teresa, when, in publishing a similar work, she was prevented by her spiritual directors from describing many of her faults, except in a general way in her preface, he says, that his "plan has been to enter minutely into the corruptions of the human heart," and he wishes his reader, in "observing the power and prevalence of sin, as maintaining its strong hold for a series of years, to be assured, that sanctification is not the work of a day, nor a week, nor a year; and that the Christian warfare ceaseth not but with our lives."

In 1757 he published, by subscription, his work on the Mineral Waters of Ireland, which comprised a series of inquiries and experiments carried on for many preceding years. His analysis was the

best that the chemistry of the time afforded; and, in a great number of cases, he evaporated the water in order to ascertain the quantity of saline contents. His tests for chalybeates were solutions of galls, log-wood, or sumach; and he perceived the important distinction between those which only answered to the tests when freshly taken from the source, but ceased to do so afterwards, and those which continued to retain the iron in solution. In ascertaining the other ingredients of this class, he also used soap, sulphuric and muriatic acids, syrup of violets, and nitrate of silver. For the vitriolic waters, in addition to the above, he immersed plates of silver or iron, and thus was able to ascertain the presence of copper in those of Nobber, Kilbrew, Ballycastle, Ballymurtagh, and Cronebawn. For the alkaline waters he also used vinegar to produce effervescence, and likewise muriate of ammonia, and in some cases resorted to the odour produced by bringing them in contact with red-hot iron. The sulphureous waters were principally tested by the acetate of lead. The following list of the waters described in the work cannot be uninteresting, and may be useful in exciting attention and inquiry towards them on the part of those medical gentlemen who may be resident in their neighbourhood.

COUNTY.	LOCALITY.	DESCRIPTION OF WATERS.
Antrim	Ballycastle	Vitriolic.
,,	Knocklade	Chalybeate.
,,	Carrickfergus	Nitrous.
,,	Kilroot	Saline.
,,	Ballycastle	Chalybeate.
Cavan	Carrickmore	Alkaline.
,,	Mountpallas	Chalybeate.
,,	Swadlingbar	Sulphureous.
,,	Derrindaff	,,
,,	Coolurgin, near Bailliborough	Chalybeate.
,,	Belturbet	,,
,,	Bailliborough	,,
Cork	Castle Townsend & Skibbereen	Sulphuro-chalybeate.
,,	Kanturk	Chalybeate.
,,	Near Five Mile Bridge	,,
,,	Macroom	,,
,,	St. Bartholomew's Well	Alkaline.
,,	Cape Clear	,,
,,	Mallow	Tepid.
Clare	Lisdonevarna	Chalybeate.
Donegal	Gorcumcaul	,,
Down	Granshaw	,,
,,	Killaghee	,,
,,	Ardmillan	,,
,,	Cardonnel	,,
,,	Dromore	,,
,,	Tierkelly	,,
,,	Ballynahinch	Sulphureo-chalybeate.
,,	Mourne Mountains	Chalybeate.

COUNTY.	LOCALITY.	DESCRIPTION OF WATERS.
DUBLIN	The Burn's Arms, The Pump, The Plough, Vernon's Head, Wheat Sheaf — Francis-st.	Saline.
,,	Next door to the Churn, Thomas-court	,,
,,	Engine-alley	,,
,,	Coombe	,,
,,	Ballydowd, or Hermitage, near Lucan	Petrifying.
,,	Howth	,,
,,	Banks of the Dodder, near Rathfarnham	,,
,,	Chinkwell, near Portrane	,,
,,	Loggshinny, near Rush	,,
,,	Smith's Quarry	,,
,,	Diswellstown	,,
,,	Templeoge	Chalybeate.
,,	Lucan	,,
,,	Tobberbony	Alkaline.
,,	St. Margeret's	Tepid.
,,	Ballydowd	,,
,,	Kilmashoge	Chalybeate.
,,	Garryduff	,,
,,	Curtlagh	,,
,,	Garristown	,,
,,	Glanmile	,,
FERMANAGH	Drumgoon	Alkaline.
,,	M'Guire's Bridge	,,
,,	Largy	Chalybeate.
,,	Drumcroe	,,
,,	Derrylester	Sulphureous.
,,	Lisbleak	,,
,,	Killasher	,,
,,	Mechan	,,
,,	Ashwood	,,
,,	Derryhence	,,
,,	Owenbreun	,,
,,	Pettigo	,,
,,	Killinshanvally, nr. M'Guire's Bridge	Chalybeate.
,,	Trillyveal, near Claby	,,
,,	Lisnaskea	,,
,,	Aghalun, near Brooksborough	,,
KILKENNY	Ballyspellan	,,
,,	Johnstown	,,
KERRY	Maherebeg	Saline.
,,	Tralee	Chalybeate.
,,	Fellswell	,,
,,	Castlemaign	Sulphureo-chalybeate.
,,	Dingle	Chalybeate.
KING'S COUNTY.	Frankford	,,
KILDARE	Dumard	,,
LIMERICK	Castle Connel	,,

COUNTY.	LOCALITY.	DESCRIPTION OF WATERS.
Louth	Ballymascanlan	Chalybeate.
Leitrim . . .	Drumsna	Sulphureous.
,, ...	Anaduff	,,
Meath	Summer Hill	Chalybeate.
,, ...	Nobber	Vitriolic.
,, ...	Kilbrew	,,
Monaghan . .	Tullaghan	Petrifying.
Queen'sCounty	Mountmellick	Chalybeate.
,, ...	Cappard	,,
Roscommon . .	Athlone	,,
,, ...	Kilroran	,,
Tyrone	Dunbonrover	,,
,, ...	Strabane	,,
,, ...	Newtown-Stuart and Omagh .	,,
,, ...	Dunaghy	,,
,, ...	Aghaloo	Sulphureous.
Tipperary . .	Ballyporeen	Chalybeate.
,, ...	Toomevara	,,
,, ...	Grove	,,
Westmeath . .	Grange More	,,
Wicklow . . .	Bally Nastoe	,,
,, ...	Bally Murtagh	Vitriolic.
,, ...	Cronebawn	,,
,, ...	Drumkit	Chalybeate.
,, ...	Glancullen	,,
,, ...	Shankhill	,,
,, ...	Ballynastoe	,,
Waterford . .	Crosstown	Vitriolic.
,, ...	Coshmore	,,
,, ...	Bandon	Chalybeate.
,, ...	Kilmeaden	,,
Wexford . . .	Enniscorthy	,,
,, ...	Wexford	,,
,, ...	Cloger	,,

Mineral waters were in high favour with the public at the time when this work appeared(*a*). The saline waters of Francis-street, in Dublin, were used at the close of the seventeenth century, but had become neglected, till revived in consequence of the researches of the Physico-Historical Society. From his experiments they appear to have contained an alkaline carbonate, common salt, and nitre; and, to produce any sensible effect, it was requisite to drink no less than four or five pints. It is probable that most, if not all, their saline contents were derived from decomposition of animal matters, conveyed to them through sewers or land-drains; but spas of any kind were at this time considered as of such value, that nothing short of full experience to the contrary could disturb

(*a*) It is to be regretted that Dr. Knox, in his work on Irish Watering-Places, did not avail himself more extensively of the abundant material contained in Rutty's various works on this subject.

their hold on the public mind. The chalybeate water of Templeogue was daily brought into town, and vended in St. Stephen's-green. We find the unhappy Stella residing at one time at Templeogue, and afterwards at Wexford, to obtain the benefit of chalybeates, when she was labouring under the "hope long deferred." The spring of Ballyspellan was in such high repute when Dr. Taafe published his Treatise on it in 1724, that it was emphatically called "The Irish Spa." Dr. Sheridan's poem is in the recollection of all readers of Swift. It begins with:

"All ye that would refine your blood
As pure as famed Lewellyn,
By waters clear, come every year
To drink at Ballyspellin."

Continuing the same rhymes, he ends his fifteenth verse thus:

"My rhymes are gone, I think I've none,
Unless I should bring hell in;
But since I'm here to heav'n so near,
I can't at Ballyspellin."

This produced a rejoinder from Swift, beginning with:

"Dare you dispute, you saucy brute,
And think there's no repelling
Your scurvy lays, and senseless praise,
You give to Ballyspellin?"

It continues the same rhymes through fifteen verses, each ending with Ballyspellin, most of them unfit to be quoted, and was believed to have occasioned the breach between them, that was never made up.

Even Rutty departs from his usual sobriety, and, in his observations on the chalybeate water near Gorey, quotes the following verse of a song on it:

"Consumptive lad,
With asthma bad,
Grew rampant and picqueering;
And widow pale,
From head to tail,
Was cured at Tobberneering."

A general neglect of the mineral waters of Ireland has taken place from the close of the last century up to the present time, and unmeritedly so with regard to several of the sulphureous and chalybeate springs, which, in many instances, are sufficiently impregnated for all practical purposes. Many of them are, moreover, situated in healthful and beautiful localities. The general deficiency, however, of accommodation suited for invalids, and the want of any notable thermal or saline aperient waters, have caused them to be overlooked altogether by the *squadrone volante* of fashionable valetudinarians, a circumstance much to be deplored in a national point of view.

This work on the mineral waters was not received by the public as the author had a right to expect. The following reflection occurs

in his Diary, 10th 12th mo., 1757: "On the printing and sale of my book, O how was I deceived as to its reception! Few but subscribers came, and had it not been for those, I had suffered greatly in the expense: learn then the worth of the world."

It was immediately attacked by the celebrated Dr. Lucas, who, before acquiring notoriety as a patriot, had published in London, in 1756, an Essay on the properties of mineral waters in general. This work, entitled, an "Analysis of Dr. Rutty's Medical Synopsis of Mineral Waters," produced a reply from Rutty, and a controversy ensued, which lasted during three years. Several able pamphlets were written on this occasion, but, generally speaking, Lucas had the best of it; still we find Rutty maintaining his temper:—thus in his Diary, 9th 8th mo., 1757, we read: "Was this day presented with Lucas's sarcastical remarks on my book. This is a wholesome discipline, though severe: a controversy ensued. God mingles trouble with pleasure. There are some imperfections and errors in my work, I thank God he had found no more." And when he had occasion to mention Dr. Lucas subsequently, in his work on the County of Dublin, he calls him the "ingenious Dr. Lucas;" and in other places speaks of him with consideration and respect.

As we intend presenting our readers with a biography of Charles Lucas shortly, we will not now enter into the subject of this controversy, but reserve it for another occasion. Among the tracts connected with this controversy we have met the following: "The Argument of Sulphur or no Sulphur in Waters discussed;"(*a*) in which "the phlogiston, sulphur, and oily matter, according to Dr. Lucas, as defended in his essay," were impugned. In this work Rutty was assisted in his chemical experiments by Dr. F. Hutcheson, the Professor of Chemistry, and by Mr. Patrick Bride. This was answered by Lucas in a few months by a very caustic pamphlet, styled "A cursory Examination of the Methodical Synopsis, &c., and of the Argument of Sulphur or no Sulphur, &c., in a letter to the celebrated John Rutty, M. D., seriously recommended to the Perusal of the reading Subscribers to the Doctor's Work."(*b*) This again was answered by two friends of Rutty; by the first in a small tract of fifteen pages, entitled, "Cursory Remarks on a 'Cursory Examination,' &c. By Theophrastus Antiphlogisticus;"(*c*) and the second by "A Letter to a Friend in Dublin, containing some Remarks on the 'Cursory Examination,' &c. By an Apothecary."(*d*) About the same time "The Author of the Manufacture of Drugs" mingled in the fray, in a tract which he published on "An artificial sulphureous Water resembling the Natural, a Thing hitherto supposed

(*a*) Dublin, M'Culloh. 1762. pp. 109.

(*b*) Dublin, Ewing. 1763. pp. 87. Finding that many of the writings of the Dublin physicians, particularly about the middle of the last century, are not only unknown but exceedingly scarce, we purpose affixing to each of these memoirs of medical men a list of their various writings, &c.

(*c*) Dublin, Saunders. 1763.

(*d*) Dublin, printed in the year 1763. pp. 21. There is no printer or publisher's name to this, but it is dated Belfast, 10th April, 1763.

impracticable in Chemistry."(*a*) Within three weeks from the issue of this pamphlet Lucas published a powerful reply, both to it and the two preceding tracts, in a "Second Letter to the learned and ingenious Dr. Rutty."(*b*)

Along with the "Sulphur or no Sulphur" work, with which they were printed, appeared, "The Analysis of Milk, and the several Species thereof, by John Rutty, M. D.;" and also "A practical Dissertation on the Uses of Goat's Whey," a tract furnished to Rutty by Dr. James Kennedy of Downpatrick. Did our space permit, we would wish to present our readers with some notice of those very rare works. We shall not, however, lose sight of the subject.

The observations which he had made on the weather and prevailing diseases of Dublin, and the results of which he communicated on several occasions to the Physico-Historical Society, and elsewhere, formed the chief materials of his "Chronological History of the Weather and Seasons, and the prevailing Diseases in Ireland," published in London in 1770. His Diary of the Weather was commenced in 1725, and was continued without interruption till 1765, except during the summer of 1737, when, during his absence in England, it was kept by Dr. Richard Weld.

In this work, besides the fevers that are briefly described under each year, the following epidemics are more peculiarly remarkable, viz.: in November, 1729, an epidemic catarrh, fatal to most old persons; November, 1739, a similar disease, passing from Germany through Great Britain, and peculiarly fatal to children. After the hard frost which commenced in December, 1739, and lasted to the middle of February, 1740, the summer was attended by small-pox and dysentery. The winter of 1740 remarkable for a famine, owing to a failure in the potatoe crop, followed by typhus during the dry and hot summer that succeeded. This is described by O'Connell, who computed that, during 1740 and 1741, the number of those who died of famine, fever, and dysentery, amounted to 80,000. 1743 an epidemic croup, sweeping off the children of whole villages in the southern and midland counties, and apparently the same disease as that described by Dr. Fothergill in London at the same time, as the putrid sore throat(*c*). Summer of 1735, and spring of 1754, agues. 1751 and 1760, distemper among horses. 1762, influenza, traced as having passed through Great Britain from Copenhagen. By the numbers of burials recorded, there is the most striking evidence of the fatality of influenza, and also of the truth of his general observation, that the greatest mortality in Dublin occurred in those years in which there was the least moisture.

The Physico-Historical Society, of which we have already given an account, having committed to him the investigation of the natural history of the county Dublin, he appears to have made it

(*a*) Dublin, Williamson. March, 1763. pp. 23.
(*b*) Dublin, G. and A. Ewing. pp. 59. March 30th, 1763.
(*c*) See Medical Memoir to Irish Census for 1841, pp. viii–xxiv. for a general account of all these epidemics.

the occupation of his walks and hours of recreation for many years; but it was not till the year 1772 that he published it. It is in two volumes, and dedicated to the Dublin Society. He obtained thirty pounds from the College of Physicians to help to defray the expenses, and there appears a list of 350 subscribers. At the commencement he takes a view of the situation of the city of Dublin, and the following description of the scenes which afforded recreation and enjoyment to our predecessors so many years ago, can hardly be read without interest now:

"This city enjoys a situation for pleasantness hardly to be equalled, whether one would entertain himself with a survey of the artificial beauties on the western side in the many public buildings which adorn it, among which I shall only mention two which were the foundations of private persons, because they do honour to human nature, particularly the hospital founded by Dr. Steevens, and that for lunatics and idiots by Dr. Jonathan Swift; or if on the same western side he would choose to survey the natural beauties, he may take a ride to the deer-park contiguous to the city, and direct his course along the banks of the Liffey, extending several miles up the country, frequently adorned with hills and gentle declivities, partly wild and partly interspersed with woods, and sometimes with corn-fields and pensile gardens, exposed to the south, which supply the city with pease a week or fortnight earlier than colder situations.(*a*) Or if he would divert himself with a walk, he hath his choice of three very agreeable ones, viz.: one to the south-east, to that called Stephen's-green, said to be one of the largest squares in Europe; a second to the east and north-east, being that part of the Strand which is lately reclaimed from the ocean by a vast bank, called the North-wall; the third, to the west, on the bank of the Bason, or great reservoir of water for the city; which said several walks may be said to vie with each other in delightfulness. Again, on the north side of the city are numerous gardens, supplying the inhabitants with their produce; and if we travel further northward, and nearer the coast, we have the sea frequently and beautifully intersected with islands; or if, in another position, we take a view from the south-west to the south-east, our sight is agreably bounded with a range of mountains, making up almost a semicircle, some of which seem to pierce the skies(*b*) with their awful and magnificent summits: so that, upon the whole, which way soever one turns his eyes, a situation more delightful, or a greater variety of pleasing objects can hardly be conceived."

(*a*) The present Strawberry Banks.

(*b*) This may refer to Sugarloaf, which, in the View of Dublin, appended to the rare map published in 1728, is represented with a slender conical summit, terminating almost in a point. This mountain is altogether composed of quartz rock, and a remarkable process of disintegration has gone on at its summit, producing a vast mass of *debris*, principally on the western face of the cone. How far the actual form of the mountain may have been thus altered within a short period of time would be an interesting inquiry to the geologist.

The descriptions of the uses and applications of vegetables, indigenous or cultivated in the district, are excellent, and derived both from reading and his own observation. It strongly suggests the value of a work on the same subject, suited to the wants and habits of the present time, but is also an evidence of the difficulty of effecting improvement among the great masses of our people. As an instance, he describes the uses to which the ashes of the full-grown thistle are applicable as an alkali; and yet, although it has been proved that those ashes contain above thirty-five per cent. of potash, yet we never see them collected or lixiviated; and they are very generally not even pulled up, or placed to rot on a dunghill, till after they have shed their seeds and secured a succession of noxious weeds over the surrounding country. In this part of the work are many melancholy instances of the vain efforts made by the Dublin Society, and other patriotic bodies, to stimulate indolence into activity by premium and bonus, proving that the true industrial resources of a country consist, not in its soil, or its water power, or its minerals, but in the truth and integrity, the energy and perseverance of its inhabitants.

The description of the economic uses of so many productions of nature going to waste around us, is, however, well suited to illustrate how much it is in the power of the physician to be of use to his fellow-creatures, not only by the exercise of his benevolent vocation of healing the sick, but by the application of his knowledge of the material world to their general advantage and enjoyment.

In the zoological department there are plates of the bull's-eye, the cherrychirper, the ska, the cock widgeon, the easterling, and the popjack diver. The account of fish is the most defective. Under the head of minerals he has bestowed the greatest pains in his observations and experiments on clays and marls, and, next to them, on those kinds of stone which furnish materials for the builder. He in this work also resumed the subject of mineral waters, and has given a series of experiments on the water of St. Patrick's Well at Finglas, contrasted with Malvern Waters; also a series of experiments made annually on the springs of Francis-street, during the twelve years that had elapsed since the publication of his work on Mineral Waters. These shew the saline contents to vary so much as to leave but little doubt that their impregnation was from extrinsic and accidental sources.

The chalybeate spa of Lucan mentioned in the "Mineral Waters" was that which exists at present, at a short distance to the left from the high road entering the village from Dublin; but in the year 1758, that is a year subsequently to the publication of that work, the present sulphureous spa, near the river, in Mr. Vesey's demesne, was discovered, and soon came into high repute. The water was conveyed to Steevens' Hospital for the service of the patients, and he has arranged the cures performed by it under the heads of cutaneous diseases, ulcers, scrofulous cases, and diseases of the first passages; and he has not omitted a decidedly unfavourable case, in which, he says, the remedy was used "because it began to be modish, rather than

from proper advice;" adding, "that a few such cases must have blasted the reputation of this inestimable spring for ever, had they not been confronted by such a multitude of indisputable instances of its good and powerful effects."

In the zoological department of this work there is not much originality. The author has, however, successfully followed up, for the county of Dublin, what had been previously effected by Harris for Down, and Smith for Cork and Waterford. And the letters S. and H., prefixed to so many of his descriptions, shew how largely he availed himself of the knowledge of his predecessors. Notwithstanding, many of his own remarks possess much interest to the naturalist. The differences between the English and Irish hare has attracted the attention of naturalists within the last few years; and has also been remarked by sportsmen. Rutty, however, alluded to the fact of the well-known inferiority of the fur of the Irish hare in the manufacture of hats in his day. Mr. Thompson, who, some time since, made a communication to the Royal Irish Academy on the subject, has, however, just informed us, that "characters on which to found satisfactorily specific differences between the Irish and Alpine hare do not exist, either zoologically or anatomically, although the habits, or rather haunts, of the animals are so markedly different."

The work concludes with the details of his history of the weather. His hygrometer was a sponge dipped in brine, which, he adds, is an excellent magnet in respect to the moisture of the air, varying in weight nearly 200 grains. From 1717 to 1726 he used the diaries furnished by Isaac Butler, "astronomer," who was subsequently employed in the Physico-Historical Society to collect specimens of natural *history*, and was also engaged as "*satellite*."(*a*) The diary of the weather terminates in 1765, thus presenting a series of observations extending over forty-eight years, that being, as far as we are informed, the longest registration of the weather of Dublin now in existence.

In his Spiritual Diary he says of his preparations for this work: "From 1740 to 1745 I was engaged in the natural history of the county Dublin, and was led a long dance on birds, fishes, and fossils, and in *compotations* for information, and was greatly hurt in my spirituals by these means." It is certain that the turn of his mind disposed him strongly towards natural history. Botany in particular appeared to him so important, that he wished to diffuse a taste for it among his medical brethren, but with what success may be seen from the following entries in his diary. "20th, 8th mo., 1760. A botanick walk, wherein in a manner *solus*, this noble and useful science being in utter contempt." "1st, 6th mo., 1767. A botanick walk on principle, but miserably attended; our medical, as well as ecclesiastical state is sick." "23rd, 3rd mo., 1769. Invited eight apothecaries to our botanick excursions on principle." "29th, 5th mo.,

(*a*) See Preface to vol. i. of our present Series, page xxvi.

1769. The botanick walk ; O the perverseness, the indolence, the ignorance, and the sin of the apothecaries!" "29th, 5th mo., 1770. Yesterday's botanick walk gave peace and delight upon reflection, even as a testimony against the idle sons of Æsculapius in this city, immersed in sloth and sensuality."

During his long professional life the Materia Medica was his favourite study, and all his other pursuits appeared to be followed only in subservience to this. He was ambitious to impart to it an exactitude and certainty which have been the great objects with all endowed with any adequate notion of its importance and its imperfections. Thus in his Diary, 6th month, 1756 : "O! what infants we are in natural knowledge, and particularly in the Materia Medica after centuries of years, as appears in Le Clerc's History, whilst mere copyists are innumerable." Also, "3rd mo., 1760. God hath brought thee through a very thorny path of thy life. Now impends the great work of thy life, the Materia Medica. Lord preserve."

It was not completed till June, 1773: "Now finished the fair transcript of my Materia Medica, the principal work of my life ; a work of no present advantage to me, but I hope will prove so to others. Exercised a little Sabbath on this occasion." It was written in Latin, and sent over for publication to Holland. In the instructions concerning his will, written in February, 1774, he says, that last summer he had sent the Latin MS. of his Materia Medica to Holland, and that if the printing of it be delayed till after his decease, he gives the said MS. to Thomas Fowler, of Micklesham, Wilts, that he, with advice of Drs. Fothergill and Lettsom of London, may dispose of same; the profit to go to Thomas Fowler. It did not appear till some time in 1775, the year of his death, and we have no means of ascertaining whether this labour of forty years was ever seen in print by the author(*a*). It was dedicated to him in an elegant Latin preface by Van Royen of Leyden, dated 25th September, 1773, in which he styles it *desideratum novumque immensi laboris opus ;* yet declines to assent to some of his identifications of ancient medicines, and particularly of hellebore and squill, regretting that the observations of the ancients should have become so generally useless, in consequence of their want of systematic arrangement of the subjects of natural history. The great rarity of the work renders it necessary that we should give the following brief epitome of its contents. The prologomena consists of

1. An alphabetical list of diseases, with the medicines suited for them, according to the Greek, Latin, and Arabian authors.
2. A classification of medicines according to their sensible qualities.
3. Do., according to their sensible operations.
4. A catalogue of simples having the same name as used by the ancients.

(*a*) The title of it is as follows :—"*Materia Medica, antiqua et nova, repurgata et illustrata sive de Medicaminum simplicium officinalium Facultatibus.* Tractatus Authore Johanne Rutty, M. D. Opus XL. Annorum. Londini: E. & C. Dilly. Rotterodami: Holsteyn & Beman. 1775."

5. Substances really different, though called by the same names by the ancients and moderns.
6. Substances called differently by us from the ancients.
7. Medicines of modern discovery, unknown to the ancients.
8. Remarkable medicines mentioned by the ancients, but not described by them so as to be certainly recognised.
9. Medicines derived from the Arabians or modern Greeks.
10. Medicines derived from America.

The body of the work is in alphabetical order, and under the head of each simple substance he gives its sensible qualities, its chemical properties according to the tests used at that time for determining acidity, alkalinity, astringency, &c.; and lastly, an account of its physiological and medical properties. This latter class of facts is derived from the older authors, with some of his own observations subjoined. It is in the paucity of those that the work is most defective. He seems to have had an unjustifiable want of confidence in his own experience, which must have been both extensive and accurately recorded, and to have preferred to rely on the authority of the ancients, which, in this department, is peculiarly unworthy of confidence, not only by reason of the uncertainty of identification, but by the differences of race, of climate, of diet, and of habits in their patients, from our's. The work never reached a second edition, and it appears that it must have had a very limited sale, which is to be ascribed not only to the expensive quarto form in which it appeared, or to the Latin language in which it was written, and which at that time was rapidly falling into disuse; but principally to the circumstance that Dr. Cullen's excellent and practical work on the same subject appeared almost immediately afterwards, and soon secured to itself the suffrages of the British medical public, which it continued to retain for several succeeding years.

Thus the "Opus Quadraginta Annorum," which was intended by the author to place the Materia Medica on the basis of positive facts, and so to effect its total reformation, was neglected even from its first appearance, and passed rapidly into oblivion. It is now so scarce that not one of the public libraries of this city contains a copy.

From the time of his election into the Physico-Historical Society in 1744 he took a prominent and active share in their proceedings, and their thanks were repeatedly voted to him for his exertions. This Society met in the committee-room of the House of Lords, and numbered among its members several peers and other persons of distinction, who appear to have enlivened their philosophical pursuits by social entertainments conducted in a manner so little to the mind of Rutty, that they became the subjects of constant self-admonition and lamentation in his Diary. Thus: "21st, 5th mo., 1756. Impends a drinking day at a Parliament meeting. Lord preserve from captivity and from the damnable sin. Accordingly marched off refreshed." "8th, 1st mo., 1756. Feasted with the new philosophers."

"5th, 8th mo. A feast wherein a little swinish." "11th, 11th mo. Feasted; idle, punning wit there not enough discouraged." "20th, 4th mo., 1757. Piggish at a feast." "22nd, 11th mo., 1758. Impends a feast. Take care." "23rd, 5th mo., 1759. A compotation disagreeable and beyond the holy bounds on a philosophical expedition."

The Medico-Philosophical Society was founded from the following circumstance: "22nd, 11th mo., 1756. A happy thought of presenting C. S. [Charles Smith, M. D., author of Natural History of Cork, &c.] with an old MS., partly laid a foundation for a most useful and virtuous society in this land of indolence. Blessed be the Lord! for I never dreamt of the good consequences I humbly hope entailed on this seeming accident." Rutty's numerous communications to this Society are still extant in the "Repository," the Minute-Book, and unpublished Memoirs and Proceedings of that body, now preserved in the libraries of the Royal Irish Academy, and the Association of the College of Physicians. Of the entire number of papers in the Repository, amounting to 230, he contributed ninety-nine, principally on subjects relating to the materia medica, mineral waters, or natural history. In this Society, as elsewhere, he had to complain of the prevailing apathy with regard to science, and of the disposition to convert meetings ostensibly held for its promotion into scenes of conviviality. Thus: "16th, 4th mo., 1759. O how little public spirit even in our temporals; I am forced to tug the oar almost alone in the service of a medical Society." "19th, 6th mo., 1766. At the Medical Society almost alone: a sad world in nature and in grace. O where is public spirit!" "3rd, 10th mo., 1770. At our medical convention some real profit, but with a mixture of ungodly jokes. I fear I countenanced them too much. Must we go out of the world to fly from its contagion?" After Rutty's death the Society became more and more negligent of the object of their institution, till at last they ceased to keep any records. They insensibly degenerated into a social club, dining at each other's houses on the most expensive scale; and thus for many years before its final extinction, about twenty-five years ago, they gave occasion to a well-known punster to say that from a Philosophical they had become a Fill-œsophageal Society(*a*).

It must, however, in justice be confessed, that Rutty's notions on the subject of abstinence were not such as could be expected to meet with general acceptance either in this or any other country. He was, in fact, an ascetic; and probably so, both from holding that abstinence was meritorious in a religious point of view, as well as from having often experienced in his own person that depression and hebetude which the slighest infraction of its rules produces in some individuals. Thus: "12th, 4th mo., 1754. Feasting rather beyond the holy bounds. O how difficult to keep innocent in company! Solitude is surely more eligible, yet society useful, but the sancti-

(*a*) For an account of this society see Preface to vol. i. of our present Series, p. xxviii.—February, 1846.

fied use of it very laborious." "16th, 7th mo., 1775. Dogged; ate too much." "18th, 9th mo. Dined on bread and three glasses of wine and a repast of a domestic tea. 19th. A luxurious dinner on potatoes, onions, and cauliflowers, and three glasses of wine. 20th. Dined on broth this third day of my exercise of temperance, and was lightsome on it." "21st, 10th mo. Dined on saffron cake and tea." "7th, 11th mo. Dined on bread and water to cure crapula." "12th, 7th mo., 1756. Dinner chocolate, and ate to live." "3rd, 3rd mo., 1758. Dinner on nettles." "19th, 5th mo. Dogged on fasting." "13th, 9th mo., 1764. Ate bread and drank water for dinner." "17th, 11th mo., 1765. Dined on bread and water on principle." Though he smoked, yet it was not without compunctious visitings that "the pipe enslaved."

As a physician his practice was evidently not lucrative. His obscure style of living appears to have excluded him from coming into competition with the fashionable practitioners of the time, and his character for benevolence must also have caused him to be imposed upon by many. His complaints on the unrighteous detention of his fees are numerous, and will, no doubt, powerfully awake the sympathies of many of our readers. His indignation on this point was often roused to a degree which he found difficult to repress. "13th, 10th mo., 1755. Eleven patients, and not one fee, and my patience abused considerably. I muttered a little, I hope not unrighteously." "29th, 11th mo., 1755. The medical profession exhibits strongly the vanity and wickedness of the world, where the more work the less pay." "18th, 9th mo., 1756. A pretty handsome supply of paupers, but few of the rich." "26th, 1st mo., 1760. Much medical work and little wages. Lord give patience!" "17th, 5th mo., 1760. Eight patients and not a penny." In common with many who have allowed their services to be taken for nothing, he received his full share of ingratitude and of disregard of the value of his prescriptions: "1st, 7th mo., 1755. Contempt from a patient, and pretty calm under it." "16th, 8th mo. A rencounter with a clamorous woman on a patient dying, and in dread of the mob, but was delivered, blessed be the Lord!" "26th. Great impertinence from a patient; borne tolerably, blessed be God!" "12th mo., 1757. Insulted and vexed by unrighteous contempt from even a poor patient, whom I was obliged to desert."

We have not been able to procure any account of the peculiar style of Rutty's practice as a physician. The merits of the medical practitioner, often unknown to, and even unappreciated by those whose lives have been saved by them, are forgotten along with the occasions which have called them into action, and the memory of them usually perishes with the existing generation. He does not appear to have held any hospital appointment, but availed himself of the opportunities of witnessing the practice of Steevens' Hospital, as he alludes to it in his Materia Medica. Only one professional letter has come into our hands, which we insert as a specimen of his style and character in this point of view. It was addressed to

the grandfather of the gentleman who obligingly lent it to us, and was intended for him and his wife, which accounts for the use of the plural pronoun.

To Joshua Strangman, Mountmellick:

Dublin, $\frac{3}{2\,3}^{mo.}$, 1749.

"Loveing Ffriend,—In answer to thy let^{r}. I received yesterday I should be glad it were in my power to send you any directions, that might be to the purpose, and of real service, at this distance.

"To be enabled to judge whether either of y^{e} waters you mention, or any other medicine, may be proper, all y^{e} lights that can be given in so difficult and long depending a case are little enough, and therefore I can give no judgment of this or that method on y^{e} present representations of y^{e} cases until I have a more minute account from your physician, and particularly of her present degree of strength, and the variation of it, and of y^{e} pulse from their former state, and what medicines have been already ordered, besides several other particulars that must occur: without this precaution patients run giddily into a right or wrong course, and had better have been quiet and done nothing.

"I am willing to serve you to y^{e} utmost of my power, and have told you y^{e} road in which alone I can do so, who am,

"Thy sincere ffriend,

"Jno. Rutty."

We are indebted to Dr. Roget for the following letter of Rutty's to his cousin, Dr. W. Rutty, who was second Secretary to the Royal Society, from 1727 to 1730. It is one of many from the same hand, still preserved in the archives of that body:

"*Dublin, March* 21, $17\frac{2\,9}{3\,0}$.

"Dear Cousin,—I am favoured wth thine of Feb 6 by wc^{h} I find thou hast done me much more honour y^{n} ever I expected, indeed I wish my papers had b^{n} better prepared for so publick an examination. However I am greatly obliged to thee for those judicious remarks upon it, and will endeavour to convert y^{m} to y^{e} advantage of my subject as much as I can. Thou very justly observest y^{t} w^{t} is likely to take up a good p^{t} of one's time ought to answer in its usefulness and I am so far from being offended at thy freedom in comunicating thy sentim^{ts} y^{t} I should deem no friendship valuable where y^{t} liberty were not allowed. However I cannot but observe one or two things upon yo^{r} remarks. First as to y^{e} determination of how far y^{e} modern medicines were known to y^{e} ancients, I cannot help thinking this to be a considerabe article, althô at last there shou'd be left but a very small number of those y^{t} are comon to us and them, since this is absolutely necessary in order to a rejection of uncertainties out of o^{r} accounts of y^{e} powers of simple medicines, wth wc^{h} uncertainties y^{t} y^{e} present acco^{ts} are pretty much perplex^{d} whilst y^{e} very words of Dioscorides are transcribed and apply'd to different medicines is allow'd. But when once y^{e} me-

dicines concerned shall be reduced to comon, doubtful & new, as there is a necessity in an affair of this nature to make use of authorities for facts, we shall know wt authors to have recourse to under each head, wch otherwise cou'd not be done. So yt I cannot but look upon thy article to be like removing the rubbish in order to build securely.

" The difficulty attending an acco: of tast & smell from not only or inability to express by words many ideas we receive yt way but also from ye diversity of both in different persons must be allowed in a great measure, but still I cannot think yt this article can be totally rejected without great injury.

" The difficulties mentioned are allow'd to obtain in many medicines & accordingly wherever ye tast and smell is uncapable of description it shall be acknowledged nor shall it be presumed to class such medicines from thence: We must not expect but to find anomalies here as well as do ye botanists in yr distributions: But from ye now several years experimts made this way by me & my boys I do affirm yt in a very great number of medicines, there is not only such an uniformity in or accounts but there is in ye medicines such a natural, evident, unstrain'd affinity between ym in that respect wch also for ye most part holds in correspondent virtues that to suppress this were to suppress perhaps ye best list of succedanea yt can be given.

" It is always to be supposed yt useless subtilty in ye subdivisions of tasts & smells is avoided & yt ye predominant evident tasts only are noticed & such in wch ye generality of mankind will pronounce the same thing upon trial.

" But not to carry this article to fondness & althô this be free from an objection attending ye chymical analysis yt it alters ye natural state of bodies, yet tast & smell are allow'd to be very defective witho: other helps & so accordingly as you very well observe ye chym: analysis & expts ye mechanick properties, ye obvious texture, ye menstruums in wch they dissolve as far as water & spirit of wine are also designed to be adopted. I wou'd fain call in all pertinent assistances & give to each its due weight.

" I cannot but be apprized of ye objection yt he yt grasps at all loses all, one man's life not being long enough & can only answer yt I have a prospect of a considerable share of leisure, yt I have made a little further progress in yt affair already yn appear'd in my specimen & yt I am determined to take care abt securing it to posterity if I leave it unfinish'd.

" For an acco: of ye laurel water I refer to Dr Sotherland in Cheapside to whom ye acco: was transmitted by Dr Weld of this city. Dr Madden indeed is now upon some further expts abt it & hopes wn he has finish'd 'em to transmit 'em by me to thee.

" In ye mean time I am very much
" thy affectionate cousin
" Jno. Rutty.

" Please to direct for me at Theophilus Harrison's, Apothecary in Fishamble street."

This letter refers to his paper on Laurel Water, which was published by the Royal Society the same year; and particularly to his work upon the Materia Medica, which occupied so much of his time and thoughts.

Although not strictly within the subjects belonging to this Journal, yet the character of Rutty would be inadequately understood did we omit to state his sentiments on the subject of religion. All his labours and his whole course of life were influenced by an ardent and constant desire to regulate his conduct according to the precepts of the Gospel. His tenderness of conscience was such, that he even accused himself of undue attention to temporal things when occupied in the studies of natural history and the Materia Medica. Reflections of self-reproach on this head are scattered throughout the Diary. Those infirmities of temper which are usually disregarded, provided they are concealed or polished down so as not to offend society, were to him subjects of constant animadversion and correction. This appears from such entries as the following: "Snappish—scolded too vehemently—mechanically and sinfully dogged—brittle upon a slight occasion—snappish on a cross call—vociferation too loud to my servant—a little crabbed with two incurables," &c.

A warmly-attached member of the Society of Friends, and an elder of that body, he constantly mourned over the instances of declension in zeal and discipline which came under his view. He seems to have occupied that peculiar position among them which can never attract popularity. He who wishes to maintain long-established institutions in all their integrity, and yet to oppose existing abuses, which have grown up along with them, will be acceptable to neither Whigs nor Tories. He has nothing wherewith to gratify the lovers of change and innovation, and is regarded with apprehension by those to whom abuses have become sources of comfort or profit. No party gathers round him; he is considered a troublesome man, and soon finds how difficult it is to stem the corrupting influences which sooner or later deteriorate all human institutions. Rutty had his full share of such disappointments, yet to the last he indulged in no bitterness, but contented himself with self-examination and the diligent performance of his own duties.

His Christianity was adorned by a truly Catholic spirit. Severe to himself alone, he looked with complacency on all who professed to derive their religion from the sources of revelation. At the beginning of every month he held a conference with a member of another religious body, whom he calls "my brother," in order to promote their spiritual improvement. He highly esteemed the writings of Bishop Ken and other divines of the Church of England. When Wesley was in Dublin two interviews are mentioned in their respective diaries, equally gratifying to each. Of Dr. Doddrige, the famous Independent, he writes: "1764. Read Dodderige, a laconic, pathetic, energetic, and heart-searching minister. O what a pigmy I am before him!" Of Roman Catholic authors he says: "1765. Thomas a Kempis is one of my companions in solitude, and, blessed be

the Lord! I relish him better than ever;" and again: "1771. A sweet occurrence in a mass-book entitled The Path to Paradise, where there is a collection, in one view, of twenty-seven petitions, truly apposite and pertinent to the state of almost every Christian. Truly I was surprised to find so much gold in a mass-book."

In 1771 he had an attack of paralysis, which is thus noticed: "17th, 8 mo. A memorable call; a slight hemiplegia in tottering limbs, and a faultering tongue." "21st. The paralytic disease increases." During the following month he recovered, after a confinement of three weeks, and was able to resume most of his ordinary occupations till December, 1774, when he writes: "The marasmus senilis is come; a deep hollow in my thigh." His last entry is on the 8th of that month: "The voice of God now sounds louder in my great infirmity of being scarcely able to bear the cold."(*a*)

The apothecaries' account of medicines furnished to him in his last illness (now before us) contains frequent repetitions of large quantities of sulphur, with occasionally spirits of hartshorn and guaiacum, till the 22nd of April, when he commenced the use of an "astringent cordial," which was continued to the 25th. He died on the next day, the 26th of April, 1775, being in the seventy-fourth year of his age.(*b*)

He was interred in the Friends' burying-ground in York-street (the site of the present College of Surgeons) on the 27th, and the entire expenses of his funeral (from the executors' account) did not amount to three guineas. He had provided for this by the following clause in his will, viz.: "And in testimony against the vain pomps of the world, I desire that my corpse may be conveyed to the place of interment in no other covering than a plain deal coffin."

His property, which principally consisted of copyhold lands in Wiltshire, he bequeathed equally amongst a number of children of his brothers and sisters, and a cousin. He also left several legacies to objects of charity.

In 1755 his residence was in Pill-lane; he resided for many years in the house in which he died, at the eastern corner of Boot-lane and Mary's-lane, which still remains, though much out of repair. He held the drawing-room floor of this house at a rent of £10 per annum.

His Spiritual Diary passed through two editions, and was edited by some person of a different religious denomination, who added a commendatory preface. He has also subjoined a testimony concerning Rutty, drawn up the year after his death, and signed by a

(*a*) *Wesley's Journal, 6th April*, 1775. "I visited that venerable man, Dr. Rutty, just tottering over the grave, but still clear in his understanding, full of faith and love, and patiently waiting till his change shall come."

(*b*) Our readers, are, we presume, aware, that, up to the year 1805, the site on which the present College of Surgeons stands was occupied as a Quaker's burial ground. Prior to the erection of that building, any remains that could be collected were removed to the present cemetery in Cork-street.

number of leading members of the truly benevolent and aimable society to which he belonged, from which we cannot omit the following extracts:

"He was esteemed a skilful and successful physician, and was well beloved in this city, being an exemplary and useful member both of civil and religious society. His temper appeared pleasing and well guarded; mild in reasoning with persons from whom he differed in judgment, even on important and interesting subjects. He was accounted temperate in eating and drinking. He generally used to rise early in the morning to his studies.

"He was plain in dress and address; he declined ostentation, and adopted a lowly way of living; he was charitable to the poor, many of whom almost daily resorted to him for his advice and help; others, prevented by their distempers, he visited at their dwellings, and exercised a tender care toward them.

"The remembrance of his useful services has endeared his memory to us and to many more. In a good old age he departed this life with thanksgiving to God, and, we believe, in the fruition of the renewed foretaste of those good things which God has in store for those that love him."

We cannot terminate this memoir without expressing our acknowledgments to Messrs. Jonathan Hill, Samuel Bewley, and Forbes. Unless we had obtained their assistance many facts had remained unknown, for they furnished us with the means of learning much which otherwise had been lost for ever. The first-mentioned gentleman received the account of many particulars from his venerable father, who was intimately acquainted with Rutty.

LIST OF DR. JOHN RUTTY'S PUBLICATIONS.

1730.—A Dissertation on Laurel Water. In *Philosophical Transactions.*

1732.—"Extract of a Letter from John Rutty, M. D. to Dr. Mortimer, Sec. R. S., concerning the Poison of Laurel Water."—*Phil. Trans.*

1751.—"A History of the Rise and Progress of the People called Quakers in Ireland, from 1653 to 1700, &c., &c. First compiled at the Request of their national Meeting, by Thomas Wight of Cork. Now revised and enlarged, to which is added, A Continuation of the same History to the Year of our Lord 1751; with an Introduction describing summarily the Apostacy of the Professors of Christiany from primitive Simplicity and Purity through its several Stages, and the gradual Reformation from thence; and a Treatise of the Christian Discipline exercised among the said People. By John Rutty. Dublin: printed by J. Jackson, in Meath-street, Bookseller. 1751." 4to. pp. 484. The introduction amounts to seventy-eight pages.

1752.—"A Treatise on Christian Discipline." This work we have not seen; it is thus defined in the *Anthologia Hibernica*, vol. ii., p. 259; but it is probably the work described above.

1756.—"Account of the Copper Springs lately discovered in Pennsylvania. By John Rutty, M. D., of Dublin. Communicated by Mr. Peter Collinson, F. R. S."—*Phil. Trans.*

1757.—"An Essay towards a natural, experimental, and medicinal History of the Mineral Waters of Ireland; wherein, the several impregnating Minerals being investigated by a Series of Experiments, each Water is reduced to its proper Class. The Virtues of such as have been used are given from practical Observations. Divers new Waters, especially of the sulphureous and vitriolic Kind, are enumerated, and more accurately described than hitherto. The whole illustrated with Tables, exhibiting a clear View of the Experiments in concert, and a Comparison of the Irish to the English and other foreign Waters." By John Rutty, M. D. Dublin 8vo. 1757. pp. 478.

An edition in quarto was published in the same year.

1759.—"Thoughts on the different Impregnations of Mineral Waters, more particularly concerning the Existence of Sulphur in some of them. By John Rutty, M. D."—*Phil. Trans.*

This paper was in answer to Lucas's work, already referred to.

1760.—"Of the Vitriolic Waters of Amlwch, in the Isle of Anglesey; with occasional Remarks on the Hartfell Spaw, described in the first Volume of the Edinburgh Essays and Observations, Physical and Literary, and in the forty-ninth Volume of the Philosophical Transactions; and their Comparison with other Waters of the same Class. By John Rutty, M. D."—*Phil. Trans.*

1762.—"The Analysis of Milk and the different Species thereof." Dublin. 8vo. pp. 19. 1762 (written in 1758).

1762.—"The Argument of Sulphur or no Sulphur in Waters discussed; with a Comparison of the Waters of Aix-la-Chapelle, Bath, and Bristol. Wherein the Sulphur is restored to the two first, and the Contents of the last are ascertained with a somewhat greater Degree of Precision than in the Essay of the late Adept, and the injured Credit of divers other salutiferous Springs is vindicated, from the Evidence of that Author's own Experiments, corroborated by many others; being the Subjects of a Correspondence between the Author of the Methodical Synopsis of Mineral Waters and W. R., Esq., and some others. And to this is subjoined a more explicit Account of the Nitre of the Ancients."—8vo. pp. 109. Dated Dublin, 7th, 7 mo., 1762. Printed by Alex. M'Culloh (see p. 561).

1770.—"A chronological History of the Weather and Seasons, and of the prevailing Diseases in Dublin, with their various Periods, Successions, and Revolutions, during the Space of forty Years; with a comparative View of the Difference of the Irish Climate and Diseases, and those of England and other Countries. By John Rutty, M. D."—London: Robinson and Roberts. 8vo. 1770. pp. 340.

1772.—"An Essay towards a Natural History of the County of Dublin, accommodated to the noble Designs of the Dublin Society; affording a summary View, first, of its Vegetables, with their mechanical and economical Uses, and as Food for Men and Cattle; a Ca-

talogue of our vegetable Poisons; and a Botanical Calendar, exhibiting the respective Months in which most of the Simples in Use are found in Flower. Second, of its Animals. Third, of its Soil, and the State of its Agriculture; its Fossils, Mines, Minerals, and some lately discovered Mineral Waters, particularly the Sulphureous Water at Lucan, and its Medicinal Virtues, from practical Observations. Fourth, of the Nature of the Climate, from the Diaries of the Weather kept in Dublin for fifty Years past: interspersed with Meteorogical and Œconomical Observations. By John Rutty, M. D."—2 vols. 8vo. Dublin: printed for the Author, by Sleater, in Castle-street, and Jackson, in Meath-street. 1772. Vol. i. pp. 329; vol. ii. pp. 488.

1775.—"Materia Medica, antiqua et nova, repurgata et illustrata, sive De Medicaminvum simplicium officinalium Facultatibus. Tractatus Authore Johanne Rutty, M. D. Exhibens, I. Simplicia nobis veteribusque communia de quibus fere quicquid veri aut verosimile apud Græcos veteres et Recentiores Latinos et Arabes reperitur, Religitur, ennaratur, et Notis illustratur. II. Simplicia Dubia et noviter detecta quorum Vires indagantur, et Observationibus atque Experimentis Recentiorum illustratur. Adjectis Classibus simplicium secundum Qualitates et Eperationes sensibiles." —Opus xl. Annorum. Londini: E. & C. Dilly. 1775. 4to. pp. 560. Rotterodami: Holsteyn & Breman.

This publication was the *last* during Dr. Rutty's life-time.

POSTHUMOUS PUBLICATIONS.

1775.—"Observations on the London and Edinburgh Dispensatories," published the year after his death.—See *Anthologia Hibernica*, vol. ii. p. 259. This work likewise contains a brief and very incorrect notice of Dr. Rutty.

1777.—A Spiritual Diary. First Edition.

1796.—"A Spiritual Diary and Soliloquies. By John Rutty, M. D., late of Dublin." Second Edition. London: Phillips. 8vo. 1796. pp. 421. Diary commences 13th September, 1753; terminates December, 1774.

We had hoped to have been able to present our readers with a summary, or at least catalogue, of Rutty's papers preserved in the Manuscripts of the Medico-Philosophical Society, but our space does not at present admit of it. We intend to redeem our promise very shortly, and print several of the communications contained in these valuable records.

Dr. Rutty having been a member of the Society of Friends accounts for our not being able to present our readers with a Portrait this time.

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